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ABSTRACT

This document is the 11th annual summary of research and development projects in agricultural education. Included in the collection of 170 abstracts are 90 abstracts of master's papers or theses, 42 abstracts of doctoral dissertations, and 38 abstracts of funded or nonfunded staff studies. Research and development projects conducted at 30 institutions from 25 States are described. Abstracts are alphabetized by State, with each abstract including the name(s) and affiliation of the project's author(s) and a project summary. Also provided are a list of research and development activities in progress, ERIC accession numbers for previous regional summaries (1968-1974) and national summaries (1974-1984), a list of previous national editors, and author and subject indexes. Included among those topics addressed in the individual research and development efforts are the following: advisory councils, agribusiness, agricultural mechanics, attitudes, communication, community colleges, competency-based education, computers, continuing educational needs, cooperative vocational education, curriculum, educational opportunities, employer views, employment, entry-year assistance programs, farm management, 4-H, Future Farmers of America, horticulture, inservice programs, international programs, maternal employment, occupational status, orientation, public relations, recordkeeping, recruitment, safety, special needs, student characteristics, student teaching, summer programs, supervision, teacher characteristics, teacher education, and technical studies. (MN)

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Summaries of

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in

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Agricultural, Extension, and International Education

College of Agriculture

Louisiana State University
Baton Rouge, Louisiana

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SUMMARIES OF RESEARCH AND DEVELOPMENT ACTIVITIES

IN AGRICULTURAL EDUCATION

in the
United States of America
1984-1985

Compiled and Edited
by
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February, 1986

PREFACE

This document is the eleventh annual Summaries of Research and Development Activities in Agricultural Education in the United States. The "Summary of Studies" includes abstracts of completed research projects from September 1, 1984 to August 31, 1985. Abstracts on a wide array of subjects have been included with an index being provided at the end of the document. Additionally, titles of research in progress have been compiled and included in the Summaries.

A total of 170 research abstracts have been printed. Of this number, 90 abstracts are of master's papers or theses, 42 abstracts are of doctoral dissertations, and 38 abstracts are of funded or non-funded staff studies. Thirty institutions from 25 states contributed to this year's Summaries. Fifteen institutions responded to the announcement for contributions and indicated no research and development activities during 1984-1985.

The research abstracts are listed alphabetically by state in the first section of the Summaries. Similarly, the research and development activities in progress are listed alphabetically by state in section two. Eric accession numbers for previous regional and national summaries are included near the end of the document along with a listing of previous national editors. Both an author index and subject index for the abstracts of studies completed is found at the end of the Summaries.

This publication is authorized by the Research Committee of the Agricultural Education Division, American Vocational Association (AVA). Copies are distributed free of charge to each head teacher educator and head state supervisor of agricultural education. Additional library or personal copies can be purchased for $7.00 each from the editor. A limited number of copies will be available.

As editor, I wish to thank and commend the American Vocational Association for providing the majority of funds needed to print and distribute this Summaries. In addition to the many contributors for this summary, I would especially like to recognize the assistance of Dr. Bill Camp, previous national editor and Dr. Jerry Peters, Chair of the Agricultural Education Division Research Committee. Here at LSU a special thanks is due Ms. Cindy Lass, graduate student in Agricultural Education, for helping to compile the document and Janice Wildman and Myra Honore' for typing parts of the Summaries.

Jeffrey W. Moss

Jeffrey W. Moss
Editor

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ARIZONA

Bopp, Laurie Anne. (1985). Analysis of subject matter content in gardening and nutrition for elementary school students. Master of Science Thesis, The University of Arizona, Tucson.

The purpose of the study was to assess what subject matter content related to gardening and nutrition elementary school teachers perceived as important to teach their students. Intermediate goals of the study were to determine how teachers rate their own knowledge of gardening and nutrition related subject matter. Information concerning teachers' familiarity with four organizations which offer educational materials related to gardening and nutrition and their current use of such materials was also collected.

The research used was a descriptive-survey type of design. The survey instrument, a questionnaire, was distributed to the entire population of teachers at three elementary schools in economic district number 10 in Tucson, Arizona.

Elementary school teachers were able to rank subject matter content related to gardening and nutrition in order of perceived importance for elementary school students' education. Teachers perceived their knowledge of gardening-related topics as less than their knowledge of nutrition-related topics. Teachers expressed highest interest in learning about topics related to producing vegetables than nutrition-related topics. While teachers' interest in providing gardening and nutrition education seems to be high, their current use of gardening and nutrition-related educational materials from various organizations is limited.

Cox, D. E. (1985). A comparative analysis of perceived importance of teacher activities associated with the program components of vocational agriculture. Agricultural Experiment Station Research Report 286, The University of Arizona, Tucson.

The major purpose of this study was to analyze and compare the perceptions of principals and teachers of vocational agriculture toward the importance of activities in which secondary vocational agriculture teachers are commonly involved. The target population used for the study was all teachers of vocational agriculture in Arizona who had taught longer than one year, and the principal responsible for each teacher. This study was based upon the criterion-group design and utilized an instrument employing a Likert-type scale and containing 62 items. The instrument was modified from one developed, tested and utilized in Iowa, Utah and Oregon. Data were collected via mailed questionnaires with follow-up letters to non respondents.

The data were analyzed by clustering the activities into the five major components of a total program of vocational agriculture, namely FFA, SOE Program, Technical Agriculture, Agricultural Mechanics, and Adult Education. Major findings included: (1) Major differences existed in perception of importance of the SOE program; (2) Principals did not place high importance on activities involved in planning, conducting, and supervising SOE programs; (3) Principals did not perceive activities conducted by teachers during the summer months as important; (4) Principals did not perceive the importance of teacher management of the department budget as important; (5) Activities which place the teacher in the community and involved with community groups were rated significantly lower by principals; and (6) Teacher involvement in professional activities was perceived as less important by principals.

Edgmon, Cindy M. (1985). Occupational analysis in selected horticulture occupations. Master of Agricultural Education Report, The University of Arizona, Tucson.

The purpose of this study was to evaluate the competencies needed in the area of nursery employment and assess the opportunities and benefits available to potential employees entering the field of nursery employment in the Mesa, Tempe, Chandler, and Gilbert areas of Arizona.

The study was able to report on the following information: (1) Had the competencies needed in nursery employment changed in the last 8-10 years; (2) The competencies needed for beginning employees in the selected job titles of nurseryman and nursery salesman; (3) The ages and numbers of employees hired annually; (4) The occupational and/or educational experience desired by employers of the people they hire at the time of initial employment; (5) The average hourly wages of beginning employees; and (6) The economic benefits that employees receive other than wages.

Olson, Gerald W. (1984). Youth development competencies desirable for Arizona volunteer 4-H leaders. Master of Science Thesis, The University of Arizona, Tucson.

The purpose of this study was to identify youth development competencies desirable for Arizona volunteer 4-H leaders. The target population consisted of active 4-H leaders in the 15 counties of Arizona, and all 4-H agents employed by the Arizona Cooperative Extension Service. A stratified random sample of volunteer 4-H leaders was selected for the study.

A questionnaire including a cover letter and self-addressed, stamped envelope was mailed to 500 4-H leaders and all 24 agents.

The response rate for agents was 91.6% and 60% for leaders, representing 15.1% of all the volunteer 4-H leaders in Arizona. Descriptive statistics were used to analyze the data obtained for the demographic characteristics and to generate frequencies, mean, median and mode for each competency. A T-Test was used to test the differences between leaders and 4-H agent perceptions of the youth development competencies.

The findings indicate that 46 out of the 71 competencies were identified as "very important" by leaders or agents. The ranking of the competencies by leaders and agents were very similar. When the T-Test was used for comparing the means of the competencies identified by both leaders and agents, few showed a statistically significant difference at the .05% level or higher.

Rhodes, Everett O. (1984). Status of supervised occupational experience programs as perceived by vocational agriculture teachers in Arizona. Master of Agricultural Education Report, The University of Arizona, Tucson.

The purposes of this study were to: (1) Determine the current status, as reported by vocational agriculture teaching during the 1982-1983 school year, of supervised occupational experience (SOE) programs in Arizona; and (2) To determine if there were differences in the way SOE programs are perceived and administered on the basis of student's SOE participation, teacher benefits associated with SOE and the teacher's philosophical belief in SOE programs.

Findings of the study included: (1) SOE programs are widely supported by vocational agriculture teachers in Arizona; (2) The stronger a teacher's conviction of the value and need for SOE programs, the greater will be the rate of student participation; (3) Teachers with a strong philosophical belief in the value and need for SOE programs do things which increase student participation; and (4) Student participation in SOE programs is enhanced when it is treated as an integral and required part of the total vocational agriculture program.

ARKANSAS

Perkins, J. L. and Braker, C. R. (1985). Potential for student recruitment from high school vocational agriculture programs in Arkansas. University of Arkansas, Fayetteville.

Effective recruiting of academically qualified high school graduates is essential in preparing adequate numbers of animal science graduates for existing career positions. A survey of 59 vocational agriculture teachers in Arkansas was conducted to provide information useful to student recruiting. Of the teachers surveyed, 42 percent reported student numbers in their program were declining. An average of 37 percent of their students lived on farms, and 62 percent of the teachers reported this number was decreasing. Practical farm experience of students was seen as declining by 75 percent of teachers. An average of 9 percent of their students were females and 60 percent of the teachers reported the proportion of girls in their program was increasing. Only 25 percent of teachers reported an increase in the number of their students enrolling in college while 56 percent reported no change in this number. Six possible reasons why agriculture students do not enroll in college were ranked by agriculture teachers. These reasons in order of ranking were: (1) lack of personal initiative; (2) other interests; (3) insufficient intellectual ability; (4) lack of parental encouragement; (5) insufficient financial support; (6) enrollment in vo-tech programs, with the percentages of teachers ranking each reason first in importance being 53, 15, 12, 10, 7, and 3 percent, respectively. A majority of teachers suggested more direct contact with college faculty as the most effective means to improve student recruiting. When asked to suggest the most important factors which discouraged student enrollment at the University of Arkansas, a majority cited the size and location of the campus.

FLORIDA

Bradshaw, J. P. (1985). Determination of the need for extension horticultural education programs for garden center employees. Master of Science Thesis, University of Florida, Gainesville.

The central purpose of the study was to determine the need for Extension horticultural education programs for garden center employees based upon the perceptions of garden center personnel in Volusia County, Florida. To achieve this purpose, seven objectives were developed.

Data were collected by conducting on-site interviews. Of the ninety-six garden center personnel included in the sample, responses were collected from 79 personnel (82.3%).

The major findings of the study were: (1) Approximately half of the garden center personnel had no previous horticultural work experience or training prior to their employment with their present garden center. (2) The types of horticultural information that the public most frequently requests of garden center personnel are plan identification and plant selection. (3) Garden center employees perceived they could respond to most customer requests for horticultural information. (4) Managers perceived their employees could respond to most customer requests for horticultural information. (5) There was no difference between garden center employee perceived ability to respond to requests for horticultural information according to the demographic characteristics of sex, previous horticultural work experience and horticultural training. (6) The preferred method of receiving horticultural information was via Extension newsletters. (7) Approximately half of garden center personnel utilized the Cooperative Extension Service at least once in the past year. (8) Over ninety percent of the respondents were interested in learning more about horticulture.

Maday, J. A. (1985). Develop and field test written and performance student achievement measures for gardening and groundskeeping. Division of Vocational Education, Florida Department of Education, University of FLorida, Gainesville.

The purpose of this study was to develop and field test written and performance achievement measures for the occupational area of Gardening and Groundskeeping. The content of these tests was based on a list of 150 Occupational Proficiency Performance Standards provided by the Florida Department of Education. The project staff contracted with a group of vocational agriculture teachers who served as consultants on the project. These teachers wrote multiple choice test items and helped to develop performance

tasks. The resultant written and performance tests were field tested over a two month period in Florida high schools. Field test results were subjected to statistical analysis to determine validity and reliability of the items. The results of the project consist of two written tests of 193 questions each and two performance tests of four jobs each. Also included are an examiner's guide, student instruction booklet, evaluation sheets for the performance tests, and a list of materials needed.

McCall, T. M. (1985). Crop production: instructional materials acquisition project. Division of Vocational, Adult, and Community Education, Florida Department of Education, University of Florida.

The purpose of this project was to review, identify, and recommend to appropriate Department of Education personnel materials useful and appropriate in the competency-based instructional program in Crop Production and/or useful and appropriate materials to be used in developing a competency-based instructional program in Crop Production.

An advisory committee consisting of four vocational agriculture instructors and three Department of Education staff members was formed to review and recommend appropriate materials to the Division.

A resource guide containing performance standards, resource matrix and an annotated bibliography was developed. In addition, it was recommended that the Division purchase a set of six textbooks relating to the areas of crop production for each Crop Production instructor.

McCall, T. M., and Eubanks, B. Teacher's guide for the Florida record book for ownership experience programs. Instructional Materials Service, Department of Agricultural and Extension Education, University of Florida, Gainesville.

This teacher guide was developed to assist vocational agriculture instructors teach recordkeeping skills to their students using the Florida Record Book for Ownership Experience Programs. The Guide includes step-by-step procedures, examples, and transparency masters.

GEORGIA

Joyner, J. L. (1984). A follow-up study of certain characteristics of former vocational agriculture students who attended Forsyth County High School. Master of Education Applied Project. The University of Georgia, Athens.

The purpose of the project was to determine the characteristics and views of former students from 1970-1980 who had two or more years of vocational agriculture at Forsyth County (GA) High School The data gathering instrument was constructed from a similar form found in the literature. The instrument was mailed to 93 former students. Useable responses were secured from 44 former students (47.3%). Descriptive statistics were used to analyze the data. Over 80% of the respondents still lived in Forsyth County; about one-half worked outside the county. A majority earned in excess of $20,000 per year; 72.7% were in jobs outside agriculture. The largest category of employment was the trades. Over 90% said they were satisfied with their present job. A majority agreed that vocational agriculture helped them in their career, but 98% said vocational agriculture should be offered in high school and 94% would recommend that their children take vocational agriculture.

Kinnard, H. E. (1985). A follow-up study to determine the personal and professional status of Georgia Future Farmers of America state officers from 1971-72 to 1983-84. Master of Education Applied Project. The University of Georgia, Athens.

The purpose of this study was to determine the personal and professional status of former state FFA officers in Georgia, including what aspects were useful in their present life. A questionnaire was selected from the literature, adapted, and mailed to 119 former Georgia state FFA officers from the years 1971-84. The questionnaire consisted of two parts: a personal data sheet, and a list of 20 leadership functions which the respondent checked if received as an officer and rated the extent to which currently used. Respondents totaled 55 (46.2%). Descriptive statistics were used to analyze the data. A majority of the former state FFA officers were single, were elected while seniors in high school, attended college, participated in civic clubs and other community organizations and indicated that they had gained many leadership qualities but were not utilizing all the leadership skills they had obtained.

Sheppard, D. J. (1984). Factors affecting job satisfaction of teachers of vocational agriculture in District III of Georgia. Master of Education Applied Project. The University of Georgia, Athens.

The primary purpose of the study was to identify the major causes of job dissatisfaction of vocational agriculture teachers in District III of Georgia. The investigator developed a survey instrument that identified characteristics of the population, areas of their job dissatisfaction, and relative level of their current job satisfaction. Data were collected at a district meeting, which resulted in 55 returns out of 60 teachers in the District, a 91.7% rate of response. Descriptive statistics were used to analyze the data. The typical respondent: taught in a comprehensive high school, was in a single teacher department, was an agricultural education major in college, had four years of vocational agriculture in high school, had a BSA degree, and was a white, married male. Factors rated positively by the respondents included: support of the superintendent, principal and vocational director; relationship with faculty members and students; authority to do the job; adequate facilities; advisory committee; appropriate class size; lack of discipline problems; seeing students use skills gained in vocational agriculture classes; classwork and the FFA; adult work; interested parents; and other rewards of teaching vocational agriculture. Negatively rated items included: emphasis on athletics, inadequate publicity, low salaries, inadequate funding for travel, and equipment placement of problem-students, fund raising, low involvement in scheduling students for vocational agriculture classes, lack of clerical help, excessive paper work, and too many extra-school activities.

Underwood, G. H. (1984). The role of high school vocational agriculture programs in the occupational success of graduates from selected schools in the Northeast District of Georgia. Master of Education Applied Project. The University of Georgia, Athens.

The purpose of the study was to assess the role of vocational agriculture in the job success of graduates from Northeast Georgia. The population consisted of the 1979 graduates of programs that had been in place for five or more years and in which the same teacher had been in the school for the past five years. A two-page questionnaire was administered by mail to the students identified. A 10% randomized follow-up of non-respondents was conducted by telephone. A 32% response was received. Respondents were primarily male, Caucasian, from rural homes, earning over

$10,000 annually and either employed in a non-farm job or farming. A majority had completed three or more years of vocational agriculture, held the Chapter Farmer degree, and had several years of SOE programs. Experiences in vocational agriculture received high ratings from the graduates; they were in less agreement about teacher assistance, but highly supportive of specific program functions. Ninety-three percent said that they would enroll again if they had it to do over.

Yarbrough, E. E. (1985). A survey of computer use in vocational agriculture programs in Georgia. Master of Education Applied Project. The University of Georgia, Athens.

The purpose of this project was to identify and evaluate the factors hindering the acquisition of computers in vocational agriculture in Georgia's schools. Specific objectives were: to identify teachers' perceptions of the need for computers in vocational agriculture; to identify factors hindering the expansion of computer use; and to determine teacher and administrator priorities for having computers in vocational agriculture. A survey was developed to gather data. The survey was administered at the 1984 Vocational Teachers' Conference; 190 responses were received. Ninety-four percent of the teachers indicated a need for computers. Lack of funding was the most significant factor hindering acquisition of computers for vocational agriculture departments (46%). Inadequate teacher knowledge was a problem for 16% of the respondents. Of secondary importance were teacher disinterest and lack of administrator support. Lack of hardware and software, and reluctance to change were low in importance. Most Georgia vocational agriculture teachers placed a relatively high priority on having computers; they believed administrators had a somewhat lower priority for computers in vocational agriculture.

ILLINOIS

Flowers, J. L. (1985). Technical animal science skills taught in vocational agriculture classes and possessed by Illinois agricultural production teachers. Masters equivalency paper, the University of Illinois, Urbana-Champaign.

The purposes of this study were to determine the technical animal science skills possessed by Illinois agricultural production teachers, the extent to which these skills were taught, and the methods used in teaching animal science skills to students.

A total of 61 animal science skills essential to dairy, beef, sheep, and swine production were identified. Data were collected from 100 randomly selected Illinois agricultural production teachers employed during the 1983-84 school year through a mail questionnaire.

Results indicated that for a large majority of the animal science skills, Illinois agricultural production teachers had never actually performed the skill themselves. Animal science skills were acquired by teachers primarily as a result of work experience on farms while in high school or while teaching vocational agriculture. College courses in animal science do not usually provide the student with an opportunity to perform the essential skills they should teach high school students. The teachers reported medium levels of confidence in their ability to demonstrate the skills associated with beef cattle, sheep, and swine; but low confidence levels were reported for dairy cattle skills. For the 61 animal science skills, an average of 50 percent of the teachers reported they did not teach the specific skill. Approximately two-thirds of the teachers who did teach the skill used the discussion method only. Less than 15 percent of the teachers used teaching methods that included demonstrations on live animals and/or student practice. Teachers who have performed the skills tend to use teaching methods that provide for demonstrations and student practice. Teachers who are involved in livestock production on a part-time basis reported higher performance levels, indicating an opportunity to upgrade their performance of technical skills in animal science.

Koehnen, T. L. (1985). Exploratory study of instructional programs through the analysis of educational components within agricultural schools in Africa, Asia, and Latin America. Ph.D. dissertation, University of Illinois, Urbana-Champaign.

The purposes of the study were: (1) to describe the intermediate agricultural schools through key educational components in their instructional program; and (2) to determine if there

were any significant differences within the nominal variables by specific indicators of the educational program. The directors at these intermediate agricultural schools were surveyed by a mailed questionnaire developed in a University of Illinois Research Project headed by Burton E. Swanson. The exploratory study analyzed 235 institutional questionnaires from Third World countries. Institutional quality was assessed by staff size and educational level, adequacy of instructional materials, importance of the school farm for agricultural training, and adequacy of capital items and operating supplies for the school farm instructional program. An analysis of the institutional quality indicators by the nominal variables indicates there is a significant difference among institutions across geographical regions, levels of per capita income in low income countries, and among types of educational systems. Also the data analysis dispells the common perception that ministry of agriculture funded institutions are different from the ministry of education supported institutions.

The instructional program at institutions of intermediate agricultural schools involves educational components such as qualified faculty, instructional materials, and a supervised school farm instructional program. Faculty range from a Ph.D. degree level to less than a B.Sc. degree level with the majority at the lower educational qualification. Further, a majority of institutions require additional instructional materials.

The majority of graduates from these institutions are being employed by national extension systems. These institutions train field level workers for the transfer of technology to the agricultural producers in low income countries. The instructional program is usually completed within two or three years. The graduates then serve as the frontline workers in government extension agencies and other middle level agricultural positions.

Law, D. A. (1985). Extension advisers' perceptions of their jobs and their need for additional training in relation to duties and demographic characteristics. Ed.D. dissertation, University of Illinois at Urbana-Champaign.

The primary purpose of this study was to provide a basis for developing effective in-service education programs in each of 14 duties for county advisers in the Illinois Cooperative Extension Service (ICES). A secondary purpose of this study was to compare response data between selected categories of advisers as follows: (a) position title; (b) type of undergraduate degree; (c) gender; (d) years of employment with ICES; and (e) level of education.

The population included in this study consisted of county Extension advisers who had completed one year or more of employment with ICES as of June 1, 1981. The sample was self-selected based on who returned a completed questionnaire.

The research instrument was a two-part questionnaire mailed to all Extension advisers in Illinois. It was designed to be an assessment of needs of in-service programming. Final usable responses were obtained from 319 (85.29%) respondents. Statistical techniques used in analyzing the data were canonical discriminant analysis (including analysis of variance), means, medians, ranges, percentages, and frequencies.

A very high majority of advisers considered the 14 job duties to be a part of their work responsibility and requested specific in-service programs in each of the duties. In-service education was the primary source of current competence to perform all duties. Undergraduate programs were the second most important source of current competence. A majority of advisers believed that a new ICES employee should already be able to perform 11 of the 14 duties at the time of original employment. Advisers as a whole are highly confident in their ability to perform 8 of the 14 duties, fairly confident in performing 5 of the duties, and not very confident about the other duty. Advisers indicated the greatest need for additional training, and that they had the least amount of confidence in their ability to perform the duty concerning evaluating program effectiveness. Advisers perceive the ability to perform each of the 14 duties as being critical to their overall success as an adviser.

Osborne, E. W. (1985). Crop production skills possessed and taught by vocational agriculture teachers in Illinois. Staff study. University of Illinois, Urbana-Champaign.

The purpose of the study was to determine the crop production skills possessed by Illinois agricultural production teachers and to examine the extent to which crop production skills were taught in high school vocational agriculture classes. A simple random sample of 100 teachers was drawn from the population of 1984-85 Illinois agricultural production teachers (N = 370). A total of 112 crop production skills, restricted to those manipulative in nature, were listed on the survey instrument. The skills were grouped into those pertaining to implements (11), tractors (34), equipment adjustment (21), equipment operation(26), and general crop production (20). Internal consistency of the instrument was calculated to be r = .98. Eighty-one questionnaires were returned.

Over three-fourths (77.7 percent) of the mean performance levels were in the "performed myself" range. In general teachers were found to have had firsthand experience at performing a large majority of the 112 crop production skills. The mean confidence levels followed a similar pattern, with nearly three-fourths (71.4 percent) falling into the "high" range of confidence. For

the set of 112 crop production skills an average of nearly 30 percent of the teachers reported they did not teach the skill. Another one-third (36.3 percent) of the teachers used classroom discussion as their primary teaching method. Overall, an average of 25.2 percent of the teachers used firsthand methods of demonstrations or student practice to teach the skill.

Teachers who reported higher performance levels tended to (1) report higher levels of confidence in their ability to demonstrate the skill ($r = .79$), (2) use teaching methods involving demonstrations or student practice ($r = .25$), (3) be currently involved in crop farm work or ownership ($r = .38$), and (4) have been reared on farms with more acres devoted to crop production ($r = .29$). Negligible relationships were found between performance level and whether the teacher was reared on a crop farm, years of high school vo-ag, years of teaching experience, supervision of a school crop farm, number of acres in the school crop farm, and acres in the crop farm currently owned or rented.

Russell, E. B. (1985). An instrument to measure the change orientation of educators (revised). Staff study. University of Illinois, Urbana-Champaign.

The purpose of this study was to re-validate and revise the original Change Orientation Instrument as reported by the author in Measurement of the Change Orientation of Vocational Teachers (Ohio State University, The Center for Vocational and Technical Education, 1972). This effort grew from concerns in the field that the 21-item instrument may have deteriorated with the passage of time.

Revision of the instrument was based heavily on data from a 1982 Illinois vocational education dissemination project. An expanded version of the Change Orientation Instrument was used in that project by the addition of a new sub-scale on "microcomputers in the classroom." Overall instrument revision was accomplished by standard test modification procedures that included factor analysis, item-test correlations, and measures of reliability. Several versions of the revised instrument ranging from 20-37 items may now be used to fit a variety of groups of educators, not just teachers. Cronbach's alpha reliability coefficients range from .90 for the 20-item version to .92 for the 37-item version.

It was concluded that the revised instrument is still valid and highly reliable. Based on the needs of particular researchers or studies, several versions of the instrument are recommended. Virtually any adaptation of the instrument containing 20 or more items should be expected to yield high reliability. Documentation with the revised instrument includes suggested instructions for its use and a listing of 21 studies in which the original instrument has been used.

Abolaji, G. T. (1985). A study to determine the status of agricultural science teachers educational qualifications, inservice education needs,and problems of teaching secondary agricultural science in Kwara State, Nigeria. Master's study. Southern Illinois University, Carbondale.

The purpose of the study was to determine agricultural science teachers educational qualifications, inservice education needs, and problems of teaching agricultural science in secondary schools of Kwara state, Nigeria.

A questionnaire was selected as the survey instrument to gather the data needed for the study. The questionnaire was developed to identify: (1) the educational qualifications each teacher held, (2) inservice education opportunities the teachers needed, and (3) major problems of teaching agricultural science. The population consisted of sixty principals of Kwara State secondary schools that offered agricultural science during the 1984-85 school year.

Based on the findings of this study the following conclusions were stated: 1. Agricultural science teachers were mostly males with less than six years of teaching experience.
2. Teachers were not professionals as most of them had a Bachelor degree and diploma certificate in agriculture without formal teacher training background.
3. Teachers needed technical agricultural inservice training to increase knowledge, update and to increase professionalism in agriculture, and these inservice programs were not available.
4. Teachers needed one-week long vacation course and workshop.
5. Lack of funds, poor information, and unsuitable time were the inhibiting factors for teachers' participation in inservice training program.
6. Teaching methods and techniques, selection use and maintenance of teaching aids, and farm equipment were special topics preferred in inservice courses.
7. Lack of mechanical tools, lack of teaching aid and materials, lack of laboratory, and support in terms of funding from the school administrators were the most serious problems encountered in teaching secondary agricultural science.

Cogdill, K. K. (1985). Guidelines for Illinois superior FFA chapters as perceived by successful superior chapter advisors. Master's study. Southern Illinois University, Carbondale.

The purpose of the study was to identify strategies or guidelines of successful FFA chapters in Illinois, as perceived by

superior FFA advisors.

The total population of vocational agriculture teachers in the state of Illinois was used to identify the study's population. Two advisors from each section were selected. A questionnaire was selected as the most suitable instrument to obtain the necessary information. The questionnaire consisted of two pages. The first page was designed to gather information about the advisors. The second page listed twenty activities in which successful chapters participated. The FFA advisors were asked to rank each activity from one to five.

Based upon the results, the following conclusions were made:

1. Superior FFA advisors are active in the Illinois Association of Vocational Agriculture Teachers(IAVAT) and are former FFA members.
2. Superior FFA advisors feel that membership in the IAVAT and believe that being a former FFA member are beneficial in attaining a superior chapter.
3. The three most important activities ranked were FFA included in instruction, attend state convention, and publicize FFA activities.
4. The opinions of the top 25 advisors and the second 25 advisors were similar.
5. The most variance of opinions between the two groups was that, the top 25 advisors strongly agreed that all members should have SOEP's and the chapter advisor should visit each SOEP.

The following recommedations were suggested for consideration and further study: 1. Future agriculture teachers become involved with FFA, whether through their local high school chapter or collegiate chapter.

2. Agriculture teachers become active members of the Illinois Association of Vocational Agriculture Teachers.
3. Beginning agriculture teachers implement the activities as recommended by the study's population for a superior chapter.
4. All FFA members have a SOEP.
5. Chapter advisor visits each student's SOEP.

Famili, A. (1984). <u>The effects of the rotary hoe and replanting treatments on emergence of early planted soybeans</u>. Master's study. Southern Illinois University, Carbondale.

The major goal of this study was to investigate the plant emergence in early planted soybean when treated with rotary hoe and replanting treatments under water-induced soil crusting condition.

The experiment was conducted on Stoy silt loam soil (fine-silty, mixed, mesic Typic Ochraqualfs), which is subject to crusting, at the Agronomy Research Center of Southern Illinois

University at Carbondale. A field was divided into two areas. Each area had four plots. All plot areas in this experiment were designed using four replications of each treatment (length of each replication was 20 feet). The dta gathered from this study were analyzed through a computer system, SAS (Statistical Analysis System) Version, 79.5 for analysis of data.

Based on the results of this study the following conclusions were made:

1. Soil crust created by 4.4 cm (1.75 in.) had the highest soil crust strength.
2. Soybean emergence was not significantly different within the two different levels of water because of the low crust strength during the time the soybean seedlings were emerging. This was in part due to the natural rain that occurred on the fourth day.
3. The rotary hoe treatment showed the highest plant emergence compared to replanting and treatment added water and treatment check with no added water.

Galle, J. E. (1984). An analysis of microcomputer usage and needs in community college agriculture programs in Illinois. Master's Study. Southern Illinois University, Carbondale.

The purposes of the study were to determine the level of microcomputer usage within the Illinois community college agriculture program and competencies needed by community college agriculture instructors.

The study population was 137 Illinois community college agriculture instructors representing twenty-three schools offering agriculture during the fall 1984 school term. A questionnaire was selected as the most appropriate instrument to gather the information needed for this study. The questionnaire consisted of six sections. These sections dealt with demographic and personal information, microcomputer brand and availability, methods with which microcomputers were used as teaching aids, establish microcomputer instructional needs, ranking of microcomputer competencies, and determining if available instructional materials were adequate for teaching agriculutre.

From the data collected and analyzed, the following conclusions were drawn: 1. Illinois community college agriculture instructors have access to and are currently using microcomputers in their community college agriculture programs.
2. Illinois community college agriculture instructors have access to many different brand name types of microcomputers.
3. Microcomputer usage in Illinois community college agriculture programs will continue to increase.
4. Thirty-four percent of the community college agriculture instructors were fully utilizing the microcomputer's capabilities

in their agriculture programs.
5. Community college agriculture instructors uses microcomputers vary from program to program.
6. Community college agriculture agriculture instructors wanted canned programs and basic microcomputer training.
7. Community college agriculture programs need to include basic microcomputer training.
8. Microcomputer training in agriculture will be covered in existing classes.
9. Instructional materials for microcomputer use in agriculturally related topics needs to be developed.
10. Canned programs should be provided in disk form.
11. Specific microcomputer competencies are needed to teach microcomputer usage in agriculture.
12. The categories of programming and agricultural applications were the least important.

Iacomini, M. R. (1985). Horticulturalists insights concerning peripheral supporting curriculum for ornamental horticulture education. Master's study. Southern Illinois University, Carbondale.

The purpose of this study was to identify trends in professional recommendations for supporting courses to meet future occupational requirements. Specifically the study included the following objectives: 1. Analyzed the educational background of surveyed groups to determine the effect of education on the rating of peripheral supporting courses.
2 Compared the rating of suporting courses by the sampled business populations to determine the differences between horticulture specialization.
3. Identified and analyzed the differences, in course rating, between the education professionals and the industry professionals.
4. Described the differences, in courses rating, between the different types of school facilities.

A questionnaire was used to collect data. The first section obtained background data. The second section obtained a rating of courses from both the businessmen's and teachers' questionnaire. The respondents were asked to fill out the survey using the five position rating system. The third section allowed the respondent a chance to convey a personal attitude of opinion on a specific question, section, the whole questionnaire, or an area not covered by the survey.

The data described in Chapter IV led to the following conclusions: 1. The attained level of education had no significant affect on the ranking of supporting courses.
2. "Work Experience/Internship" was the only course considered

"essential" for students to possess by all educational levels,all business specializations, and teachers and bussinessmen. 3. The business specializations,the differences between businessmen and teachers, and the differences between two-year and four-year program teachers did not have a significant affect on the respondents ranking of supporting courses.
4. "Work Experience/Internship", "Plant Pathology", "Entomology", and "Plant Physiology" were considered "essential" by teachers in two-year and four-year programs.
5. There were no courses rated "not needed" by any surveyed educational level, business specialization, or teaching program.

Kabat, J. T. (1984). High school student's awareness of Rend Lake College's agriculture program. Master's Study. Southern Illinois University, Carbondale.

The study was aimed at students enrolled in vocational agriculture classes and others that were interested in a possible agriculture career.

The population of this research included high school students enrolled in high school vocational agriculture classes in Rend Lake College's district and other high school students interested in agriculture that responded to the school-wide announcement. The research included grades nine through twelve. The instrument used to collect data was a questionnnaire. The questionnaire consisted of two parts. The first part gained background information and the second part determined the students' awareness of the agriculture programs available at Rend Lake College.

Based on the findings of this study, the following conclusions were derived: 1. During a four year period (1985-1989) there should be 304 students in Rend Lake College Distirct that could be possible students of the 468 interviewed.
2. Both groups were equally informed about Rend Lake College's agriculture department with about twenty percent awareness.
3. Students were concentrating more on the subject matter than salary, choice of jobs, and social life.
4. The four most preferred agriculture jobs as rated first or second by high school students were mechanic, livestock farm manager, forester, and grain farm manager.
5. Students were not receiving an appropriate amount of information from the advertisement.

The following recommendations were suggested for consideration by Rend Lake College: 1. Send agriculture representatives to the high schools each year.
2. Provide pamphlets about the loans, grants, and scholarships available to the students.
3. Continue to have FFA contests at the college to promote

awareness of the agriculture program and facilities available.
4. Make a list available of current employment opportunities in the local agriculture area.
5. Continue to make available all three agriculture options because of the various agriculture interests of the students.
6. Inform students about the agriculture programs, cost of education, financial assistance and general studies when visiting high schools.

Kamarudin, Z. B. (1983). Adoption of agricultural innovations in a Malay farming community. Master's Studies. Southern Illinois University, Carbondale.

The primary purpose of this study was to analyze the nature of the relationships between the farmers' socioeconomic, personality, and communicational characteristics and their acceptance or nonacceptance of improved agricultural practices recommended by Extension. This type of investigation was purposeful in developing a better understanding of educational and change processes, and in providing a sound basis for planning and evaluating Extension education programs by Extension agencies.

A questionnaire containing a series of interview questions was used by the researcher in conducting interviews. The interview questionnaire consisted of eight pages. An interview schedule was developed for the purpose of collecting necessary data from the respondents. Items (questions and statements) were designed so that responses would be obtained from the respondents in relation to the objectives stipulated for this study. The interview schedule contained the following parts: 1. Questions designed to obtain information on socioeconomic characteristics of respondents. 2. Statements designed to determine the respondent's personality. 3. Items analyzing the respondent's communications behavior. 4. Questions aimed at determining the level of innovativeness or the adoption scores for each respondent. The population of the study consisted of the heads of the families of rice-growing farmers living in the district of Raub, Pahang, Peninsular Malaysia. A total of 120 farmers were randomly selected,and they constituted the study sample for this investigation.

The evidence from this study indicated that approximately one-half of the Malay peasant farmers'degree of innovativeness could be predicted when income levels, degree of traditionalism, frequency of contacts with Extension, family size, and years of schooling were known. Significantly innovative farmers had to some degree the following specific characteristics: (1) Younger (2) More years of formal education (3) Fewer family members (4) Larger amount of land used in agricultural operation (5) Fewer

years of farming experience (6) Higher income (7) Belief in the priority of modern authority (8) Emphasis in "personal control" of their future (9) Participation in community activities (10) More contacts with Extension.

Recommendations for further research and for improvement of Extension work in the Malaysian farming communities were presented.

Legacy, J. and Wells, J. (1985). A national study of recommended curricula for extension education methods classes and student internship programs. Agricultural Education & Mechanization Department Study. Southern Illinois University, Carbondale.

The purpose of this research was to determine: What extension education methods and other course content items did experienced extension agents consider important as instructional topics for an undergraduate extension education methods class and students intership program. The objectives were:

1. What were the important items to be taught in a university extension education methods class.
2. What were the important items to be taught during an extension education student internship program.

A questionnaire, used in a previous study (Memmesheimer, 1983) was modified for use in surveying CES agents. A list of nineteen extension education instructional topics identified by the Memmesheimer study were selected as the studies dependent variables. The nineteen items were listed in two categories; (1) general topics (n=7), and (2) extension method topics (n=12). Each item was rated for course importance and internship program importance.

The results of the study indicated that each of the nineteen topic items were recommended as either high or medium importance for both the extension method class and the student internship program.

The conclusions of this study were as follows:

1. Cooperative Extension Service agents reported that each of the studies 7 general instructional topics and 12 extension methods instructional topics were either most important or important items to be taught in an extension education methods class and a student internship program.
2. Differences were found by type of agent in reporting importance preferences for teaching extension methods. Agricultural extension agents reported an importance preference for 'Personal Visits', Tours and Field Days' and 'Extension Meetings'. Youth and Home agents reported a greater importance for 'Radio' and 'Television/video'.

The recommendations of this study were as follows:

1. Colleges providing methods classes and an internship program for extension should review major content topics with the results of this study.
2. Class and internship programs should teach similar topics, but with emphasis on different topics.
3. Extension education method classes and internships should be offered separately by type of agent or should allow for a variance of instructional topic importance when offered in a single program.

Nyamai, J. M. S. (1985). Inservice training needs of agricultural extension agents in Kiambu District, Kenya. Master's Study. Southern Illinois University, Carbondale.

The purpose of this study was to determine technical and pedagogical needs of extension agents in Kiambu District. The objectives were: (1) to determine what inservice training in new technology and improved husbandry practices extension agents had received during 1983 and 1984. (2) to determine the current technical training needs of extension agents, and (3) to determine the current teaching methods training needs of extension agents.

The study population consisted of 164 extension agents working in the Kiambu District of Kenya. Random sampling was used to select 80 extension agents who participated in this study.

A closed form questionnaire was designed to collect the data. This was used to make the questionnaire easy to complete and also to improve response. Part one of the questionnaire dealt with the general information about the extension agents such as age, professional qualifications, and work experience. Part two of the questionnaire dealt with the inservice training received during 1983 and 1984 by extension agents. The extension agents were asked to indicate what inservice training they had received in the past two years in crop production, livestock production, farm management, land development, and extension education methods. Part three of the questionnaire dealt with inservice training needed. The extension agents were asked to indicate their current inservice training needs in two major areas of crop production and livestock production.

Based on the findings of this study, the following conclusions were made: 1. Extension agents had unmet inservice training needs during 1983 and 1984.
2. Extension agents needed inservice training in crop production, livestock production, farm management, and land development.
3. Extension agents needed inservice training in extension teaching methods and program development.

The recommendations of this study were as follows:
1. Develop a five-year plan for inservice training of extension

agents in technical areas, extension teaching methods, program development, and use of teaching aids. 2. Further study on inservice training needs of extension agents as viewed by both farmers and subject matter specialists.
3. Review the curriculum of agriculuture training institutions with a view to incorporating some of the inservice training needs of the extension agents.

Rahman, A. A. (1985). The construction and preliminary testing of a simple tool for harvesting cassava. Master's study. Southern Illinois University, Carbondale.

The major goal of this study was the investigation of the feasibility to construct a simple leverage and grasping tool based on the basic principles of leverage to improve the traditional manual method of harvesting cassava roots.

The available cassava stalks were first propagated and allowed to grow in the greenhouse at Southern Illinois Universtiy at Carbondale. About three weeks after planting the eighteen plants were transplanted in the field at the International Training and Demonstration Center at Southern Illinois University at Carbondale.

The simple lever to determine the required torque to uproot the cassava plant was constructed and another alternative plant which might require a relatively similar torque to be uprooted was identified - corn.

It is too early to conclude from this research study that the problems regarding cassava harvesting has completely been eliminated. However, it is reasonable that the objectives of this research were accomplished.

Reneau, F. W., Legacy, J., Hahn, D., and Noel, R. (1985). Develop two vocational-technical consortium of states (v-tecs) products. Staff study. Southern Illinois University, Carbondale.

The major accomplishment of the project was the development of two V-TECS catalogs. The contents of the Computerized Numerical catalog and the Computer Equipment Repair catalog were based on data collected from incumbent workers in Illinois.

These catalogs will contribute to Illinois' and the Nation's efforts to develop competency based tasks performed in the occupational areas of computerized numerical control and computer equipment repair. The catalogs will be the basis for the development of curriculum guides and accompanying test item banks. The catalogs will provide instructors with validated tasks, performance objectives, and standards.

Three products were delivered to the Department of Adult, Vocational-Technical Education, Illinois State Board of Education, Springfield, Illinois, June 28, 1985.

Salisu, K. (1985). An assessment of inservice training needs for vocational agriculture teachers with implications for Nigeria. Master's study. Southern Illinois University, Carbondale.

The purpose of the study was to review the literature regarding vocational agriculture inservice needs studies. An attempt was made to summarize concepts and procedures which may be useful in Nigeria.

A questionnaire was selected as the most appropriate instrument to gather data needed. The researcher collected the data from the Morris Library on the campus of Southern Illinois University at Carbondale.

The survey instrument was developed to identify inservice needs of vocational agriculture teachers. Question 1 through 4 were concerned with background information regarding the inservice needs of vocational agriculture teachers. This data was very important because it provided a way of identifying the inservice needs according to specific characteristics. The characteristics included factors such as inservice courses format, reasons for attending inservice courses, and topics most preferred by vocational agriculture teachers.

Based on the findings of this study, the following conclusions were made: 1. Vocational agriculture teachers preferred a one-day special topic seminar inservice training format.
2. Vocational agriculture teachers' reasons for attending inservice courses was for upgrading of technical skills.
3. Reasons inhibiting vocational agriculture teachers' participation in inservice training was distance.
4. Agricultural production and management was a major area that vocational agriculture teachers were teaching.

The implications for Nigerian inservice training were as follows: 1. Find out what inservice training format vocational agriculture teachers in Nigeria Prefer.
2. Provide incentives for vocational agriculture teachers in Nigeria attend inservice training such as promotions, salary increase, and job security.
3. Plan inservice courses at a place and at times which are convenient for Nigerian vocational agriculture teachers to attend.
4. Use inservice education to encourage Nigerian vocational agriculture teachers to teach other specialities in agriculture such as processing and marketing, mechanics and horticulture.

IOWA

Chesnut, E. D. (1985). Perceptions of preservice student teaching experiences in agricultural education. Master of Science Thesis, Iowa State University, Ames.

The purpose of this investigation was to identify student teaching experiences considered important by beginning vocational agriculture instructors by (1) determining the importance of student teaching experiences in the conduct of programs of beginning vocational agriculture instructors, (2) comparing the importance of student teaching experiences by years of teaching experience, and (3) assessing the relationship between selected variables and the importance placed on student teaching experiences by beginning vocational agriculture teachers. An instrument was developed from a list of experience items contained in the student teaching handbook used by the teacher education program in the Agricultural Education Department and mailed to 53 first-year, second-year, and third-year Iowa vocational agriculture teachers. Forty-eight (91%) of the teachers responded by completing and returning the instrument. Teachers responded to each item in the instrument by indicating the degree of importance the item was in their present year of teaching. Items rated most important were in the classroom and laboratory, student performance, and supervised occupational experience program areas. Items rated as being least important were in the adult program area. When compared by teacher group, the importance of the instructional planning area was observed to be significantly more important to the first year teacher group.

Che, Lee. (1985). A needs assessment of the inservice training program for agricultural extension advisors in Taiwan. Master of Science Thesis, Iowa State University, Ames.

The purpose of this study was to assess the local agricultural extension advisors' inservice training needs regarding extension techniques. A wuationnaire was developed in cooperation with the Department of Agricultural Extension at National Taiwan University and field tested with 10 extension advisors. A cover letter and questionnaire were mailed to a proportional stratified random sample consisting of 300 extension advisors. An overall response rate of 70.3% was attained. A follow-up of nonrespondents was conducted. Data were analyzed using percentages, means and standard deviations. Correlations, T-tests, and analysis of variance were used as appropriate. Findings indicated that the most important training need areas were: leadership,

introduction to agricultural extension, and agricultural policy. The five overall training need items rated most important were: communication, training of future farmers, the role and responsibilities of agricultural extension advisors, marketing of agricultural products, and identifying and training local leaders. Based on the findings, recommendations for changes in the in-service training programs in agricultural extension were made to the Agricultural Extension Department at National Taiwan University.

Gamble, K. J. (1985). Impact of national FFA contests on participants' educational and occupational aspirations. Doctor of Philosophy Dissertation, Iowa State University, Ames.

The purpose of this study was to evaluate the Future Farmers of America's National Judging Contests. A correlational design was used in the investigation with select causal-comparative statistical techniques used for data analysis. The sample consisted of 225 contest participants between the years 1979 and 1981. The sample was selected by systematic sampling and included individuals from all nine contest areas. Data were collected by the use of a mailed questionnaire. Data analysis consisted of frequency counts, t-tests, ANOVAs, chi-squares, factor analysis, multiple regression, and discriminant analysis. The most important benefits participants recieved from their contest experiences were for improvements to their self-confidence and self-esteem. Thirty-seven percent of the participants were found to have occutational aspirations directly related to their contest training. No one contest was found to have a significantly higher proportion of its participants aspiring to related occupations. Females were found to have received fewer occupational advantages from having participated than were males. No relationships could be determined between participant characteristics and perceived benefits received from having participated. Participants most likely to have contest-related occupational aspirations were found to: have lower post-secondary educational aspirations, be less likely to have served as FFA officers, were less likely to have conducted a supervised occupational experience program, and were poorer students academically. All tests were conducted at the .05 level of significance.

Martin, R. A. (1984). Perceived communications and support linkages of high school principals and vocational agriculture teachers. Staff study. Iowa State University, Ames.

The main purpose of this study was to determine the extent of the perceived communication linkages between school administrators and vocational agriculture teachers. Specifically, the objective of the study was to compare perceptions of principals and teachers regarding program support, communications, contractual support and supervisory assistance. Data sources in this study consisted of 256 vocational agriculture teachers and 227 high school principals in the state of Indiana. A structured, fixed-response, self-administered questionnaire was used to collect the data. The questionnaire consisted of 30 questions using a five-point Likert scale. The data were analyzed using means, standard deviations, frequencies, and t-tests. The results of this study indicated that communication linkages were well established between vocational agriculture teachers and school principals in this state. While there was general agreement about community support for vocational agriculture programs and community resources were being used to fulfill educational needs, the findings indicated that there did not seem to be open, candid and clear communications between principals and teachers about various facets of the vocational agriculture program. The data indicated a lack of trust, confidence, and accountability of time and resources.

Jones, R. L (1985). Attitudes toward and utilization of cognitive skill development among agricultural education faculty in the United States. Doctor of Philosophy Dissertation, Iowa State University, Ames.

Among the educational reforms of the 1980s have been a myriad of proposals to revamp teacher education programs. Paralleling these proposals has been a call to develop thinking skills among students of all ages. The study's major goals were to determine agricultural education professors' attitudes toward and use of cognitive skill development within the university courses they teach. A random sample of 176 agricultural education professors nationwide were asked to complete a four-part questionnaire. The useable response rate was 78.9 percent. A 16-point transformed "Certainty Method" scale was used to generate mean composite scores on both attitudes and use. Professors' prioritizations of five goal sources were also obtained, along with demographic data. Statistical tests results led to the following conclusions: (1) agricultural education professors had a positive attitude toward cognitive skill development and frequently used cognitive skill development techniques; (2) professors with a major teaching responsibility at the graduate level had higher attitude and use scores than did professors who had a major teaching responsibility at the undergraduate level; (3) attitude and use scores signifi-

cantly differed among professors who had specialized in or were teaching certain agricultural education courses; (4) when setting course goals, "technical skills and competencies needed by students" received the highest priority among agricultural education professors. Societal needs received the lowest priority.

Jones, S. P. (1985). An assessment of motivational factors affecting College of Agriculture faculty involvement in international development activities. Doctor of Philosophy Dissertation, Iowa State University, Ames.

The purpose of this study was to assess college of agriculture faculty motivation for involvement in international agricultural development activities. The study identified demographic characteristics of faculty included in the study, developed a personal characteristics profile of the faculty, determined original sources of motivation for involvement in development work, and developed strategies to stimulate motivation for development work. The population of the study was comprised of 195 college of agriculture faculty from five midwest land grant institutions who had indicated an involvement in development activities. Usable returns were received from 158 faculty, 81 percent of the population. Major findings of the study were: (1) Few younger, untenured faculty were involved in development work. It was primarily the older, more established faculty who were involved in development activities. (2) Faculty with developing country experience reported that their experience was valuable and applicable to their university assignments and duties. (3) Respondents, particularly those with extensive developing country experience, closely identified with the set of 25 personal characteristics described as being important for individuals involved in development work. (4) Respondents generally agreed that the sources of original motivation for involvement in international development work had been influenced by the importance, the nature, and the personal value of development work in fulfilling the intrinsic needs of the respondents. (5) The most important strategies to stimualte motivation in development work concentrated on recognition and rewards for professional efforts in development, participation on developing country assignments, and receiving information on university programs in developing countries.

Nwozuzu, E. I. (1985). Principles of agricultural education in Nigeria. Doctor of Philosophy Dissertation, Iowa State University, Ames.

The purpose of the study was to develop and suggest ways of implementing acceptable basic principles of agricultural education in Nigeria. A total of 1380 people in Nigeria including students, their parents, teachers, principals, government officials, and farmers/agribusiness people were interviewed. A questionnaire used for the study was a modified version of a similar questionnaire developed in Iowa which consisted of 90 sub-principle items and respondents rated each subprinciple item according to the degree of importance using a 99 point scale. The six groups of people involved in the study rated the 90 sub-principles as of "much importance" to be emphasized in Nigerian public school education. It was discovered that eight principles which had been shown to undergird basic beliefs about agricultural education in Iowa had serious implications for Nigerian agricultural education.

Rheault, K. W. (1985). A behavioral profile of vocational agriculture teachers. Doctor of Philosophy Dissertation, Iowa State University, Ames.

The purpose of the study was to create a profile of the effective vocational agriculture teacher by identifying behaviors using selected teacher effectiveness criteria. Vocational agriculture teachers from 12 north central states served as the population for the study. A systematic sample of 330 teachers along with 220 substitutes needed to replace nonrespondents from the original 330 teachers were used in the study. Two instruments were developed or use in the study. One instrument, the Vo Ag Teacher Profile Survey, was used to collect data concerning the use of teacher effectiveness behaviors by respondents in their actual teaching practices. The second instrument, the Vo Ag Teacher Profile Survey: Demographic Data, was used to collect specific demographic data from selected respondents. Respondents receiving the second instrument were selected based on total response score calculated from the forty teacher behavior statements used in the first instrument. A high and a low teacher effectiveness group was formed based on these total response scores. Vocational agriculture teachers can reliably be classified into teacher effectiveness groups based on their use of selected teacher effectiveness behaviors. Vocational agriculture teachers who were classified as being highly effective used effective teacher behaviors to a high degree across the realm of teacher performance areas. Demographic characteristics were found to exist which differentiated the high teacher effectiveness group members from the low teacher effective group members. A profile of the effective vocational agriculture teacher, consisting of 31 teacher behavior items and 12 demographic items, was the end product resulting from the findings of the study.

Ruff, E. F., III. (1985). Factors related to the occupations of Garnavillo High School male graduates. Master of Science Thesis, Iowa State University, Ames.

The purpose of this study was to determine the factors related to occupations of male graduates from the Garnavillo High School from 1971 to 1975. The objectives of the study were to determine: (1) the relationships between graduates' occupations and selected characteristics of their home environment, (2) the relationships between graduates' occupations and their educational backgrounds, (3) the correlation of selected occupational, home and educational factors. Questionnaires were sent to 87 former living male graduates from which 65 questionnaires were completed and returned. According to the agricultural classification of the graduates' occupations, 41.5 percent were engaged in farming, 38.5 percent were employed in nonfarm related occupations, and 20 percent were engaged in off-farm agricultural occupations. Graduates who were employed in off-farm agricultural occupations were engaged in farm implement and equipment or feed and/or grain occupations. Approximately 17 percent of the graduates were employed in occupations classified as "laborer", 10 percent were employed in service occupations, 7.7 percent were employed in professional occupations, 7.7 percent were engaged in operative occupations, and 40 percent were engaged in farming when occupations were grouped according to the U. S. Bureau of Census classification of occupations. Sixty-three percent of the graduates were living in the home county and 92.6 percent of the graduates who had entered farming were living within 50 miles of Garnavillo. Seventy-two percent of the graduates in the bottom quartile were living within 50 miles of Garnavillo, compared to 50 percent of the graduates who ranked in the top and third quartiles and 68.2 percent of the graduates who ranked in the second quartile of their respective graduating classes.

Sajilan, S. B. (1985). Teaching competencies needed by extension workers in transferring new agricultural technologies to farmers in Malaysia. Master of Science Thesis, Iowa State University, Ames.

The purpose of this study was to identify and verify teaching competencies needed by extension workers in Malaysia and to verify when these competencies should be learned or taught. One-hundred and six Malaysian agricultural extension workers comprised the population of this study. A structured fixed response, self-administered questionnaire was used to collect the data. The questionnaire consisted of 53 competency statements to which respondents indicated the level of importance of the competency

and when the competency should be learned. The data were analyzed using frequencies, percentages, means, standard deviations and t-tests. Based on the findings of this study, all 53 competencies were considered to be important in the training of Malaysian extension professionals. Competencies regarding method demonstrations, field trips, tours, and exhibits were considered to be extremely important. Traditional teaching methods (ie. lecture, meetings, group discussions, panel discussions) rated higher than several other teaching methods incorporating the use of several different tools or aids such as flip charts, micro-computers, videos, newspapers, radio and television. The data indicated that seven competencies should be leanred on the job and nine competencies should be learned in a Bachelor of Science degree program. There was little agreement as to when the other 37 competencies should be learned. Inservice training was perceived as a viable source of agricultural information and technology transfer not as a source of learning new instructional technology.

Sanggin, S. E. (1985). Characteristics and needs of farmers in sixteen Unversity of Malaysie extension villages and their implications to extension program planning. Master of Science Thesis, Iowa State University, Ames.

The purpose of this study was to determine the characteristics, problems and needs of farmers in 16 extension villages in Malaysia. A secondary purpose of the study was to determine the perceptions of farmers regarding the quality of past and on-going extension programs. Five hundred fifty-one heads of households were interviewed in the 16 extension villages. A structured open-ended questionnaire was used to collect data. Interviewers were trained to conduct the interviews and collect the information. The responses were analyzed using frequencies, percentages, means and standard deviations. Findings indicated that farmers: (1) were not aware of all the services the extension program had to offer; (2) needed to be involved in extension activities; (3) wanted to be involved in planning educational programs; (4) relied heavily on neighbors, friends, and relatives for new information and technology; (5) were over-dependent on government subsidies; (6) were critically concerned about pests of crops and livestock; (7) were most concerned about village water supplies. The study verified that extension programs needed to be continuous, sequential, and integrated in these extension villages.

Smith, M. W. (1985). Educational objectives and administrative criteria for the National FFA Contest program. Doctor of Philsophy Dissertation, Iowa State University, Ames.

The purpose of this study was to formulate educational objectives and administrative criteria for the National FFA Contest Program. A modified Delphi technique, utilizing a series of three questionnaires, identified 19 educational objectives and 20 administrative criteria (criteria was divided into three areas: adding, discontinuing and changing) for the national contests. The objectives and criteria were formulated and identified by a panel of 33 individuals representing various groups involved with the National FFA Contest Program. The educational objectives and administrative criteria selected reflected the concerns of the delphi panel that the national contest have national significance in that: (1) the topic area represented by a contest is representative of and complimentary to the curriculum of vocational agriculture nationally, (2) the content of a contest reflect the competencies and knowledge required currently within the area represented by a contest, (3) the contest be evaluated by appropriate individuals to ensure educational value and quality, (4) the contest be in agreement with stated objectives (overall and individual), and (5) the contest have adequate resources to provide a quality educational experience. The educational value of the contests as an instructional tool was implied by the Delphi panel. The panel, however, did caution that the contests should not be the focus or become the end toward which instruction in vocational agriculture is directed.

LOUISIANA

Allen, L. and Johnson, B. (1985). Food processing course outline and resource manual. Curriculum development, Louisiana Tech University, Ruston.

The project was designed to provide secondary vocational curriculum material and resource guide in meats and meat processing. The material was compiled by a writing team composed of seven vocational agriculture instructors and university personnel. The completed material contains instructional units for meat identification, purchasing of meat, nutrition, meat cooking and preparation, meat cutting and merchandising, and meat evaluation. Illustrations and lesson examinations are included. The 249-page document was funded through the Louisiana Department of Education.

Asiabaka, C. (1984). The teaching ability, job performance, and attitudes of vocational agriculture teachers who received their undergraduate degrees in selected land-grand and nonland-grant universities in the United States. Ph.D. Dissertation, Louisiana State University, Baton Rouge.

The purpose of this study was to compare the teaching ability, job performance, and attitudes of vocational agriculture teachers who received their undergraduate degrees from selected land-grand and nonland-grant universities during the 1981-82 school year in the United States.

A list of the vocational agriculture teachers who graduated from land-grand and nonland-grant universities in the 1981-82 school year was requested from 37 universities in ten states that have both land-grand and nonland-grant universities which prepare vocational agriculture teachers. A proportionate random sample of 200 teachers was drawn from the population of 300 reported by the universities. Data were collected from school administrators, vocational agriculture teachers, and state supervisors of agricultural education.

There were no significant differences in the administrators perception of the teaching ability and job performance. The quality of the vocational agriculture programs and the attitudes of teachers toward vocational agriculture was the same for graduates of both universities. One possible solution to vocational agriculture teacher shortage is to include more nonland-grant universities in the preparation of vocational agriculture teachers.

Knowledge of subject matter was rated higher by the administrators for both groups of teachers than was their teaching skills.

Both groups of teachers had less positive attitudes towards adult education in agriculture. The teachers from land-grand and nonland-grant universities had lower program quality scores in the area of adult education.

Both groups of teachers had higher program quality scores on SOEP component of vocational agriculture. State supervisors of agricultural education indicated that the quality of teacher preparation at land-grant universities was better. However, 29 percent of the variance of the supervisor rating was explained by the type of institution from which they received the bachelors degree.

bin Yahya, I. (1985). Role of the United States agricultural teacher education profession in international agriculture and rural development. Ph.D. Dissertation, Louisiana State University, Baton Rouge.

The primary goal of this study was to answer the question: What has been the contribution of the United States agricultural teacher education profession to the international development process? The study, therefore, was a synthesis of past involvement of agricultural teacher educators in international agriculture and rural improvement activities since 1950.

The population consisted of 102 agricultural teacher educators in the United States with at least .51 FTE responsibilities in teacher education programs and experience in international development activities abroad.

Eight specific objectives of the study were the identification of (1) primary goals of international projects; (2) exact activities of the educators; (3) other experts who co-worked with them; (4) their specific accomplishments; (5) major problems they encountered, and (6) future role of their profession in international development, and the solicitation of (7) recommendations for solving problems of agriculture in developing countries; and (8) advice for successful assignments abroad.

A census survey was conducted. Data were collected using a mailed questionnaire. Respondents recorded their responses on cassette tapes. Responses were transcribed, analyzed, and synthesized by commonality of each of the eight objectives.

Ninety-six agricultural teacher educators have been involved in over 230 separate foreign assignments since 1952. They served in 78 countries world-wide.

Project goals were varied and ranged from institution-building to trade promotion. Activities of educators differed greatly, as for example, from institutions building to programs establishment to teacher training.

Over 120 different experts representing several occupational clusters co-worked with agricultural teacher educators on their foreign assignments. Educators reported encountering major problems while on assignment. They included bureaucratic red-tape, goals-need conflicts, and culture shock.

Teacher educators reported both tangible and personal accomplishments. They also suggested a variety of roles for their profession in future international development activities. In addition, they made recommendations to host governments and aid-donors for solving problems in international agriculture. Finally, educators offered a variety of suggestions for success as an international agricultural educator.

bin Yahya, I. and Burnett, M. F. (1985). Assessment of preservice preparation by recent graduates of agricultural education programs in Louisiana. Funded by the Louisiana State Department of Education, Louisiana State University, Baton Rouge.

Quality educational programs are a function of the size of the difference between the "what is" and "what should be" of such programs. The smaller the difference, the higher the quality and vice versa. Determination of the "what should be" is a difficult but not impossible task. Graduates of four Louisiana programs were used to make such a determination for agricultural teacher education. Census survey of 61 vocational agriculture teachers was conducted using a mailed questionnaire. Basically, teachers were of the opinion they did not attain high levels of competencies as beginning teachers and suggested some improvements in undergraduate training be made.

Ezekwe, Cyril Ihenacho. (1984). An Analysis of the Status of Vocational Agriculture/Agribusiness Programs in East Baton Rouge Parish. Master of Education Thesis, Southern University, Baton Rouge.

The purpose of this study is to determine the perceptions held by High School Vocational Agriculture/Agribusiness students, teachers, principals and employing businesses in East Baton Rouge Parish concerning (a) the state of Vocational Agriculture/ Agribusiness Programs, (b) the current status of Vocational Agriculture/Agribusiness Programs with regard to quality of curriculum, availability of facilities, qualification of teachers and other demographic factors, (c) the value of the total Vo-vocational Agriculture/Agribusiness Programs offered in East Baton Rouge Parish Schools and (d) the degre of similarity that exist among perceptions held by students, teachers, principals and employing businessses.

The survey method of investigation was used to obtain data. A questionnaire was mailed to teachers, principals and employing businesses. The author administered questionnaires to students with the help of principals and vocational agriculture/agribusiness teachers in their respective schools. Three hundred and twenty-two of 387 participants (38.4%) responded in this study. The data were compiled in tabular form for easy reporting and interpreting. Finding the percent of responses to each perceptual statement constituted the main procedure for data analysis. Agreement or commonality of perceptions among the participants is determined based on at least 50% agreement by participants on each questionnaire item.

The results of the data analysis revealed that businesses in East Baton Rouge Parish, especially agricultural businesses and the public in general were not receiving sufficient information relative to activities of vocational agriculture/agribusiness programs. The results also show that there is lack of coordination between employing businesses and high schools offering vocational agriculture/agribusiness programs resulting in programs that are not being sufficiently articulated to meet the educational needs of agriculture and in particular the students.

It is recommended that instructions and training in the classroom should include field trips to reflect the changing conditions in agriculture/agribusiness industries. Field trips to agricultural facilities and industries should be encouraged and made regularly in order to provide the student with the necessary opportunities, knowledge and experiences in productive businesses for the world of work.

Kotrlik, Joe W. & Lelle, Mark. (1985). State and national officers' opinions of state supervision and teacher education in agriculture. Staff Study, Louisiana State University, Baton Rouge.

The purpose of this study was to determine the attitudes of state and national officers of vocational agriculture teachers associations towards state supervision and teacher education in agriculture in the United States and factors related to these attitudes. After three mailings and a phone follow-up, a 99.3% response rate was received from the 159 teachers in the sample. No differences were found between the responses by mail and phone. Data were collected using a closed form questionnaire. The questionnaire yielded Cronbach Alpha coefficients of .87 and .91 on the two scales in the instrument. The data were analyzed using descriptive statistics and one-way analyses of variance with post hoc Scheffe' tests. The alpha level was set at .01.

The findings indicated that the officers held more positive attitudes towards state supervision in the seven areas addressed in the study than towards teacher education. The analysis of variance revealed that officers who were visited more often (3-7 visits and 8+ visits) had higher opinions of college/university faculty activities than those officers who were visited less often (0-2 visits). The three highest rated faculty efforts most likely to result in improvement of local programs were more money for faculty activities, more workshops and more teacher visits, while the three highest rated state staff efforts were more money for state staff activities, more state staff and more teacher visits. The ratings received by state supervisors were in the good (4) range on a five point scale of excellent (5) to unacceptable (1) while the teacher educator ratings were between good and fair (3). It was recommended that both teacher educators and state supervisors need to examine the results of the study and determine if changes are needed in their programs. In addition, a similar study should be conducted with the general population of vocational agriculture teachers to determine if similar attitudes exist.

Kotrlik, Joe W., Parton, G. P., and Lelle, Mark. (1985). Technical agriculture knowledge level attained by students enrolled in Vocational Agriculture II classes. Staff Study, Louisiana State University, Baton Rouge.

The purpose of this study was to assess the technical agriculture knowledge level attained by students who had completed Vocational Agriculture II and the factors related to the knowledge attainment level. Two instruments were used in the study. The teacher form consisted of questions designed to secure demographic information and also to determine which of the basic curriculum topics were being taught. The 52 item test was developed from a test item bank used for the Louisiana literary rally tests. The test had a coded area where the teacher could record student demographic information. The test yielded a Kuder-Richardson 20 coefficient of .87 on the sample data. The populations used in the student included all vocational agriculture teachers in Louisiana and their students. A random sample of 140 teachers out of the 275 teachers in the state and their classes were selected based on Cochran's sample size formula. Of the 140 teachers, 118 (84.3%) administered the test and provided the teacher information as requested. As a result several procedures, it was determined that the teachers and students were representative of the population and did not differ from the non-respondents. Descriptive statistics, inferential t-tests, and oneway analysis of variance with post hoc Scheffe' tests were used to analyze the data.

The mean score on the test was 54.9%. Top half FFA members scored higher (59.3%) than bottom half members (53.4%) and non-members (47.7%). Students with SOE programs scored higher (57.0%) than students without SOE programs (50.3%). The grand means of student scores by teacher did not differ according to age, years teaching experience, degree, number of teachers in the department and geographic location. In addition, no differences existed between the grand means of those teachers who had part-time income from agriculture, agribusiness, or non-agricultural sources and those who did not.

Miller, Charles. (1985). Microcomputer use in vocational agriculture programs in the United States. Master of Science Thesis, Louisiana State University, Baton Rouge.

The purpose of the study was to describe microcomputer use in vocational agriculture programs in the United States and to determine if selected teacher and school variables were related to microcomputer use. The population for the study included all vocational agriculture teachers in the United States. A random sample of 300 teachers was selected to participate in the study. After two mailings and a phone follow-up, a 79.8% response rate was achieved. No differences were found between the responses by mail and phone. The instrument was based on the instrument use in a New York study conducted by Dean Sutphin at Cornell University and also on a review of research in the area of microcomputer use in education. The instrument yielded Cronbach Alpha coefficients of .84 and .87. The data were analyzed using descriptive statistics, t-tests, and analyses of variance with post hoc Scheffe' tests.

Approximately 50% of the programs in the United States had at least one computer at the time of the study. The data indicated that over 70% of these microcomputers were Apple while just over 20% were Tandy/Radio Shack. Most vocational agriculture programs were using microcomputers for program management and teacher material preparation with some programs using them for instructional purposes. Less than 20% of the respondents with computers indicated that their students were proficient at using the microcomputer. The average number of computers per for those vocational agriculture programs with computers was 1.5 at the time of the study. Teachers in programs with microcomputers perceived a much higher level of support for the use of microcomputers in their programs from their principals and school boards than those teachers in programs without microcomputers.

Schafer, Steve. (1985). Factors affecting farm safety practices of farmers. Master of Science Thesis, Louisiana State University, Baton Rouge.

The purpose of this study was to identify the farm safety practices used by farmers in Beauregard Parish, Louisiana, and to determine what factors influenced the use of these safety practices. The population consisted of all farmers, including principle farm operators in the case of corporations, in Beauregard Parish. Only one person was interviewed per farm. A random sample of 145 was selected from the 926 farmers in the parish. A 100% response rate was achieved. The data were gathered through personal interviews using an interview schedule based on a review of the literature and consultation with three farm safety professionals. Due to the instrument design, reliability estimates were not appropriate. A safety index score was developed based on the items in the questionnaire. The data were analyzed using descriptive statistics, analysis of variance with post hoc Scheffe' test, and t-tests. The alpha level was set at .01 for all statistical tests.

Over nine percent (9.1%) had been involved in farm accidents and 4.5% had had family members or hired workers involved in farm accidents. Only 27.3% had ever attended a farm safety program and only 32.5% were aware of the existence of a farm safety program in their area. On a scale of 1% to 100%, the mean safety score was 59.2% with a range of 39.0% to 85.6%. Large farmers (over 175 acres) had higher safety scores than small (1-40 acres) and medium size (41-175 acres) farmers. Farmers with an educational level above high school had higher safety scores than farmers without a high school education and high school graduates. Farmers with incomes of $33,000 and above had higher safety scores than farmers with incomes of $6-20,000 and $21-32,000. No differences were found among the safety scores by number of years farming and farmer's age. Farmers who had participated in safety programs had higher scores than those who had not. No differences in the safety scores existed between farmers who had and had not been involved in farm accidents. (Caution: small n, only 14 farmers in the sample had been involved in accidents).

MARYLAND

Bloodsworth, D.A. & Holmberg, I.D. (1985). Developing a secondary vocational curriculum in commercial fisheries for Tidewater and Bay areas. Master of Science Thesis, University of Maryland, Eastern Shore.

The purpose of this study was to develop a curriculum to be used in the area of commercial fisheries on the secondary vocational level. A statewide curriculum is needed in this area to facilitate program development since only one program is operating presently in Maryland.

The curriculum presented in this paper was developed using several methods. However, an advisory committee made up of persons from several related fields is responsible for the final product. Also included with the finished curriculum is the background and need for the study, the process used in developing the curriculum and recommendations for teacher education.

The curriculum is applicable to the Maryland counties surrounding the Chesapeake Bay. Recent changes in fishing laws coupled with the distribution of harvestable species permit Maryland watermen to work the entire Chesapeake Bay. This has made most of the skills and techniques common to all parts of the Bay.

Cooper, E.L. & Bazley, M.C. (1985). A study of the curriculum and a follow-up of graduates of the agricultural education program at the University of Maryland, College Park, 1949-1982. Staff Study, Department of Agricultural and Extension Education, University of Maryland, College Park.

The purpose of this study was to determine the quality and relevance of the curriculum in agricultural education at the University of Maryland, College Park as perceived by graduates who completed student teaching between 1949 and 1982 inclusive. A mailed questionnaire was used to obtain demographic data, employment data, educational experiences and perceptions regarding their college program in agricultural education.

The respondents called for greater emphasis on courses with agricultural engineering, economics and resource management skills. To a lesser extent, additional emphasis on animal science, horticulture and speech was indicated. Apparently, skills in basic education and agricultural education are adequately covered in the existing program.

Some additional findings were: (1) High school FFA experiences and personal interest in agriculture were the most influential factors in choosing agricultural education as their college major; (2) Fifty-four percent of the respondents held the B.S. as their

highest degree, while 33 percent held the M.S. and 8 percent held a doctorate; (3) Eighty-six percent were employed full time; (4) Fifty-four percent earned over $25,000 per year; (5) Eighty-seven percent of the graduates recently employed were satisfied with their employment; (6) Fifty-three percent listed teaching vocational agriculture as their first employment after graduation, followed by 14 percent for agriculture business and service, 7 percent Cooperative Extension Service, 6 percent agricultural production and 5 percent military.

It was concluded that the University and those majoring in agricultural education would have several choices in correcting skill deficiencies of B.S. graduates. These include: (1) Increase the learning requirements in the technical courses; (2) Require additional credits in the B.S. program; (3) Require students to obtain more skills through occupational experience; (4) Have prospective students take courses in technical institutions; (5) Develop certain technical skills after acquiring a B.S. degree; (6) Require teachers to do an internship where technical skills may be learned.

Ensor, D.M. & Nelson, C.L. (1985). A 1985 examination of the volunteer master gardener program in Maryland; with in-depth examinations of the programs in three selected counties. Master of Science Thesis, University of Maryland, College Park.

The Master Gardener program's goals were to save the Cooperative Extension Service professional time and costs by screening dedicated volunteers. If these goals were valid, then how valuable is the volunteer Master Gardener program to the Cooperative Extension Service? If the volunteer Master Gardener program is valuable, what should be done to enhance it?

Volunteers had always played important roles in Cooperative Extension educational programs. This tradition continued and expanded through the volunteer Master Gardener program. Research indicated that most gardening questions could be answered by experienced and trained Master Gardeners. To examine the value of the Master Gardener program, two questions concerning professional time saved and cost savings value were considered. To examine ways for enhancing the program, two questions concerning screening techniques and incentives for participation were considered.

The study included a non-experimental methodological research design. The data were collected from seventy-two selected employees of the University of Maryland Cooperative Extension Service and 107 selected Maryland volunteer Master Gardeners by using a survey technique incorporating questionnaires. The data were analyzed utilizing descriptive statistics, chi square, a t test for independent samples, and the Kruskal-Wallis one-way analysis of

variance.

The results and conclusion indicated that professional time was saved. There was a cost savings value of the program. More than half of the County Extension personnel surveyed were not familiar with screening techniques. Incentives for attracting Master Gardeners are opportunities to increase knowledge; gain new skills; receive useful training; and gain personal satisfaction.

Gillus, D.L., Nelson, C.L. & Cooper, E.L. (1985). An assessment of present and future needs for workers having agricultural competencies in Carroll and Howard Counties, Maryland. Master of Science Thesis and Staff Study, University of Maryland, College Park.

The purpose of this study was to obtain accurate and comprehensive information on present and projected employment opportunities for jobs in agriculture and agribusiness in Carroll and Howard Counties. Information concerning desirable work attitudes and competencies of agricultural employees were also collected in the study.

The study consisted of two different surveys mailed to either farmers or agribusinessmen in Carroll and Howard Counties. A 20% sample of farmers in both counties was randomly selected to be surveyed. All identified agribusinesses in both counties were surveyed and non-returned surveys were followed up with a telephone call or personal visit.

The 126 agribusiness and the 104 farm respondents in Howard County reported a total of 1257 full-time and 284 part-time current agricultural workers in their businesses. Similarly, the 80 agribusinesses and the 28 farm respondents in Howard County reported a total of 757 full-time and 151 part-time current agricultural workers. Seventy-four percent of the Carroll County and 80% of the Howard County agricultural employers indicated that they "sometimes" or "always" hire people with satisfactory knowledge and skills for their business.

From the findings of the study it was concluded that there were approximately 5277 full-time and 2056 part-time agricultural workers in Carroll County, and 3337 full-time and 1076 part-time agricultural workers in Howard County, Maryland in 1984. Thus, it was concluded that the number of full-time and part-time agricultural workers in Carroll County totaled approximately 7333 and for Howard County approximately 4413. Further, projections provided by the respondents in both counties seem to indicate that the number of employees on the farms and in agribusinesses will remain constant or increase slightly over the next five years from 1983 through 1988.

Schrock, R.L. & Holmberg, I.D. (1983). A survey of continuing educational needs of producing farmers on the lower Eastern Shore of Maryland. Master of Science Thesis, University of Maryland, Eastern Shore.

This study investigated current interests in continuing education on the lower Eastern Shore of Maryland. The sample consisted of 274 producing farmers from the counties of Somerset, Worcester, Wicomico and Dorchester. A survey instrument was constructed to obtain current interests of producing farmers. The data were collected by use of a mail questionnaire. The data were analyzed using the Statistical Package for the Social Sciences.

Implications for the University and extension agencies were discussed in terms of meeting farmers' on-going educational needs. The findings from the study indicated much interest in marketing and agronomy. The findings also indicated research was perceived as the primary function of the University, according to the respondents. In addition, hands-on or theme-meeting type of instruction is preferred.

MICHIGAN

Bhuju, Ukesh Raj. (1984). Conservation Strategies of Nepal. Master of Science Thesis, Michigan State University, East Lansing.

The purpose of the study was to describe and analyze conservation strategies advocated by HMG in the national development plans during 1951-85. The strategies, i.e., objectives, priority, budget, organization, technical areas for emphasis, people's participation, and legislation, were chronologically reviewed and compared for each plan period.

Conservation was one of the sectors in the plans during the period 1951-85. Its strategies during 1950's and 1960's were inclined towards government control and people's participation in implementation. During 1970's, the strategies were modified with an appreciation of conservation through the preventive technical measures and the mutual cooperation between government and the people.

By the turn of 1980's, conservation was upgraded to the top priority national program supported with appropriate legislation so that people could participate at all levels.

Conservation as an integral part of development should be envisaged in other developmental works along with the support through organization, legislation, and people's participation.

Powers, Larry. (1985). A Study of Professional Role Perceptions Held By Two Selected Groups of Vocational Agriculture Teachers in Michigan. Ph.D. Dissertation, Michigan State University, East Lansing.

The purposes of this study were (1) to identify and analyze the role perceptions held by production-agriculture and ornamental-horticulture teachers, (2) to determine if there were differences between the two groups of teachers concerning the execution of selected role activities, (3) to determine if there were differences between the two groups of teachers concerning time allocated to each program area, and (4) to determine if the two groups of teachers differed concerning the importance they attached to each program area. A variety of sampling techniques were used to select 96 vocational agriculture teachers. A survey instrument was prepared using the jury technique and pilot tested with four vocational agriculture teachers.

The data was analyzed using multivariate analysis of variance (one-way, two-way) and using .5 as a differential between means. The data analyzed indicated that the two groups differed with respect to (1) role perception, (2) role execution, (3) time allocated to each program area, and (4) the importance each group attached to each program area. The data also indicated that teacher characteristics and school characteristics influenced (1) role perception, (2) role execution, and (3) the time allocated to each program area.

MINNESOTA

Adam, M. (1985). A comparison of the functions and role of the agricultural extension service in the Sudan and the United States. Master of education paper. University of Minnesota, St. Paul.

The purpose of this paper was (a) to identify the functions, role and components of the United States Agricultural Extension Service and (b) compare these findings with the Sudan situation.

The research method used was an integration of information from courses taken at the University of Minnesota plus a review of literature on agricultural extension work in the Sudan and the United States.

The relationship between extension, teaching and research in the United States with an early history of funding is lacking in Sudan. In Sudan there are no formal links between research and extension. In the United States, Extension has focused on agriculture, home economics and youth development with attention on the production per person. In Sudan the focus is on cotton as a cash crop and some home economics work. The Extension Service in the United States functions on a system that starts at the local level and proceeds upward. In Sudan the program often comes from the federal level and proceeds downward often without regard to people needs. The extension staff training differs from highly trained in the United States to limited training in the Sudan. There is very limited financial support for extension in Sudan.

The primary recommendations were to: (a) develop strong links between research and extension, (b) develop programs from real needs at the local level and (c) provide adequate funding for programs.

Anderson, A. (1985). A follow-up study of the 1978-79 academic year college of agriculture graduates of the University of Minnesota. Master of arts paper. University of Minnesota, Minneapolis.

The purposes of this study were: (1) to determine the current types of occupations and employment status of the 1978-79 graduates of the College of Agriculture; (2) to determine the level of related agricultural experiences possessed by graduates at the point of entering and exiting college; and (3) to compare descriptive data obtained from this study with other follow-up studies of agricultural graduates. The population of this study was 289 graduates of the College of Agriculture in the academic year 1978-79. A follow-up questionnaire was utilized to survey the population. The responses were analyzed using descriptive statistics and frequency distributions. The conclusions were that (a) students at the College of Agriculture should be made more aware of the career opportunities available to them, (b) graduates should feel no apprehension in their desire to change jobs or re-career after a few or many years in the work-place, and (c) it is useful to continuously follow gradutes for administrative and advising purposes.

Azar, M. (1984). Development and evaluation of a certification test for farm equipment mechanics in the area of electrical systems. Doctor of philosophy thesis, University of Minnesota, Minneapolis.

The purpose of this study was to develop a valid and reliable certification test in the area of electrical systems for farm equipment mechanics.

A pool of 211 multiple-choice test items was developed. A panel of 22 experts in this area reviewed the items for content validity and ranked each item according to its importance. A one-hour, 100 item test was developed using the

highest ranked items. A personal data sheet determined the background knowledge of each examinee. The test was administered to 206 technical school students and 21 mechanics. The mechanics' supervisors were asked to rate the skill and ability of each mechanic in the area of electrical systems.

Based on the analysis of the test results, the reliability coefficient of the test was as follows: .92 for the total group; .92 for the student group and .88 for the mechanic group. Mechanics obtained significantly higher scores than all students.

Students in their second year of school or students with some knowledge of electricity did a significantly better job than students in their first year of those with no background in electricity (construct validity). A strong correlation (r=.74) was found between the supervisors ratings and mechanics' test scores (criterion-related validity). All but 20 items fulfilled the requirements for difficulty index (10%-90%), discrimination index (higher than or equal to .20) and distractor effectiveness.

The test was found to be highly reliable and valid. The test covered basic level electricity and could be used to differentiatie, with high levels of accuracy, between individuals with various levels of knowledge and skill in the area of farm equipment electrical systems.

Deml, C. (1985). <u>The impact of maternal employment outside the home on the family</u>. Master of Agriculture paper. University f Minnesota, St. Paul.

The central problem was what impact will mothers work outside the home have on the development of tomorrows generations.

The literature suggests that changes will involve a total restructuring of parental roles and lifestyle. Family size in the future will be smaller and couples are choosing to postpone childbirth until later in life. Fathers will take

equal responsibility in child rearing. As women's work moves closer to mens, it appears women will pursue high-level professions. Government planning and policies will need to reflect the changes in life styles. The private sector must revise banking, doctor, dentist and other service hours to adjust to these new lifestyles. Volunteer positions will become paid positions.

The literature suggests that maternal employment by itself, has little influence on a childs behavior. One should not look at the changing family structure with despair but as a challenge for richer living.

Gissuararson, M. (1985). Improving food processing practices, quality, and income of food processing industries through extension education. Master of Education paper. University of Minnesota, St. Paul.

The purpose of this paper was to review basic organizational features of the United States Cooperative Extension Service and to determine ways and means of designing an extension program in the food science and industry for Iceland.

The paper is based on a literature review, interviews with extension leaders and lecture notes from courses taken at the University of Minnesota.

The Extension Service is an organization grounded in agreements between the federal, state and local governments. All levels share in the financial support and program development. Programs cover diverse areas of subject matter. Programs moved into the food industry only when farm production levels were secured. The extension programs have had a part in production, marketing, processing and distributing food products. There is no extension service in Iceland. Parliament should pass an extension act. Extension work needs to begin work with farmers followed by educational assistance to the food industry.

Leske, G.W. and Persico, J. Jr. (1985). Handbook for a cooperative vocational education information system. Minnesota Research and Development Center for Vocational Education, University of Minnesota, St. Paul.

The purpose of this development study was to provide cooperative vocational education (CVE) coordinators and other individuals responsible for establishing, maintaining or supervising CVE programs with a system for assessing and publicizing program performance.

The authors previously conducted a review and synthesis of literature which identified those characteristics which contributed most to the success of a CVE program. The model derived from this study provides a framework for determining the degree to which selected essential characteristics are present and the extent to which selected outcomes have been achieved. The model involves four major steps: (a) selection of key outcomes, (b) data collection, (c) analysis of key program outcomes and processes, and (d) information dissemination.

The goal in designing the handbook was to focus on the most easily gathered data, that which results from following minimally accepted practice guidelines. The primary sources of data are instructor-coordinator reports, student forms and employment supervisor reports. The field testing process involved nine schools purposely selected to represent variation in program areas, school organization, and geographic location.

The handbook suggests procedures for accomplishment of each step in the model and includes prototype worksheets, questionnaires and report forms. The emphasis is on outcome information reporting and public information.

Morgan, Richard (1985). Personality type factors of adult farm management instructors in Minnesota. Master of arts paper. University of Minnesota, Minneapolis.

The central problem of this study was to determine the personality type of adult farm management teachers in Minnesota.

All 99 of the full-time adult farm management instructors in Minnesota were included in the study.

The instrument was the Myers-Briggs Type Indicator(MBTI) Form G. An introductory letter preceded the (MBTI). An explanatory letter, questionnaire and self-addressed, stamped envelope followed. Non-respondents were sent two follow-up letters and questionnaires. The remaining non-respondents were called. The final response rate was 90.9 percent with 90 returned surveys. Thirty master instructors were identified by the area agriculture coordinators.

The data showed that 38 percent of the master farm management instructors were ISTJ personality types (introvert, sensing, thinking, judging). About 24 percent were ESTJ (introvert, sensing, thinking, judging) personality types. There were few differences in personality factors between the master teachers and the remainder of the group. The master group had more introverts.

In conclusion, adult farm management instructors prefer to work with data, facts and practical use topics. Their personality seems well suited to their work. The extrovert-introvert factor may be a reason adult farm management instructors are reluctant to hold class sessions. College undergraduates interested in adult work may wish to use a personality preference base in selecting career.

Pike, W.C. (1985). Education and farm policy. Master of arts paper. The University of Minnesota, Minneapolis.

The purpose of this study was to synthesize information pertaining to the relationship of vocational agriculture education to the development and implementation of farm policy in the United States. A review of the literature highlights agricultural history and the concurrent related educational thrust. The study suggests a conflict between common short-term agricultural education goals and apparent long-term economic

trends in agriculture. The study further implies the need for a nationwide decision concerning the structure of agriculture designed by the citizens of the United States.

Thomas, R.G. and Peterson, R.L. Access to educational opportunity in rural communities: alternative patterns of delivering vocational education in sparsely populated areas Volume 1: Problem, study design and procedures, findings, conclusions, and recommendations. Agricultural Experiment Station Bulletin AD-SB-2433. University of Minnesota, St. Paul.

The central focus of this study was to gain a knowledge base on the delivery of vocational education to sparsely populated rural areas. Five different delivery patterns were examined: centralized center approach, a centralized non-center, a decentralized noncenter and a centralized mobile unit.School districts in Minnesota, South Dakota and Illinois were studied.

The case study method was used for each pattern examined. Three researchers spent from one to three days at each site. School administrators, school board members, advisory committee members, teachers, counselors, parents and students were interviewed and consulted during each observational visit. Considerable library and literature search was conducted on each site to gather basic community information. Each system had major strengths and wweaknesses. Four critical factors in inter-school district cooperation were identified and described. These factors were (1) individual school district autonomy and flexibility, (2) sense of ownership and control by the school district in the cooperative arrangements, (3) perceived relationships between school district costs and benefits of cooperation, and (4) school district incentives for cooperating.

Thomas, R.G. and Peterson, R.L. (1985). Access to educational opportunities in rural communities: alternative patterns of delivering vocational education in sparsely populated areas. Volume 3: The northwest multidistrict: a mobile facilities center. Agricultural Experiment Station Bulletin AD-SB-2703. University of Minnesota, St. Paul.

The central focus of this study was the centralized mobile unit pattern for delivering vocational education to sparsely populated rural areas.

The case study method was used. The school administrators, school board members, center staff, advisory committee members, teachers, counselors, students and parents in six of the nine participating school districts in the Northwest Multi-district in South Dakota were interviewed.

The mobile facility units were either 12' x 60' or 14' x 60' trailers especially designed for various vocational programs. The programs (one per trailer) were general metals, building trades, electronics/electricity, quantity foods, auto mechanics, agriculture #1 animal science, health occupations, sales/distribution and agriculture #2 crop science. The units spend one semester at a school (three two-hour teaching blocks) and are moved to the next district.

This system has several positive features. It avoids the need to transport students, provides equality of school district status in the operation and costs, has clear management structures and provides quality and flexibility in facilities. The major weakness appeared to be in a lack of program continuity (once every 4 1/2 years) and the inability to incorporate continuity to student organizations.

MISSISSIPPI

Agnew, D. M. (1985). The effectiveness of simulation as an instructional technique in agricultural mechanics. Doctor of Education Dissertation, Mississippi State University, Mississippi State.

The primary purposes were to compare the effects of a simulation technique and a conventional teaching technique on (1) student low-level and high-level cognitive achievement, and (2) retention of that information. The simulation technique involved a device which connected individual schematic symbols using color-coded wires to form a dc electricity or hydraulic circuit for an agricultural tractor. The conventional technique used a Ford power train or tractor as realia. The study was conducted as a randomized control-group posttest-only experimental design. Twelve specialized agricultural mechanics programs with 246 students were randomly selected from a population of 32 programs in secondary public schools in Mississippi. Nine hypotheses were analyzed using MANCOVA with mechanical aptitude (MA) and/or cognitive achievement (CP) scores as covariates. Each school tested two units of instruction. The teacher was assigned either the conventional or simulation technique for dc electricity and the alternate technique for the hydraulic unit.

Results indicated no significant differences between the two treatments when achievement scores on CP1 and CP2 posttests were compared and adjusted using MA scores. When CP2 scores were analyzed using MA and CP1 as covariates, a significant difference ($p<.05$) favored the conventional approach for hydraulics subject matter. Simulation was an effective technique for immediate achievement for both subject matter units. The conventional technique was best for retention of hydraulic subject matter when MA and CP1 were used as covariates.

Elliott, G. E. (1985). A comparison of two instructional methods for teaching microcomputer competencies to Extension personnel in Mississippi. Doctor of Education Dissertation, Mississippi State University, Mississippi State.

The problem was to determine whether there was significant difference in achievement of microcomputer knowledge on cognitive tests between those taught by computer assisted instruction, the traditional lecture-demonstration method, and combinations of these. A quasi-experimental design was used. Attitudes of those taught were assessed with a semantic differential attitude scale. The population for the study consisted of 146 county and district personnel with the Mississippi Cooperative Extension Service.

The treatment involved one-day training sessions at four different locations with four treatment variations.

The findings revealed that immediate cognitive achievement was not significantly influenced by the method of instruction. A statistically significant difference was found in attitudes of the persons taught by traditional lecture-demonstration having a more positive attitude. Further, extending the method of treatment over a 15-day period with take-home materials from the workshops had no significant effect on achievement. When take-home materials are different from those used in the workshop, achievement was higher if those receiving computer-assisted instruction took home traditional handout materials.

Lee, J. S. (1985). The equivalency of selected junior college and university introductory courses in agriculture. Staff study, Mississippi State University, Mississippi State.

The purpose of this study was to investigate the equivalency of selected agriculture courses taught in Mississippi public junior colleges and at Mississippi State University. The procedure involved surveying all seniors in eight selected agriculture majors. The survey went to 167 students. Of the 121 who responded, 53 had attended a junior college. Statistical analysis involved frequencies, means, standard deviations, and t tests.

The findings show that courses vary in equivalency on attitudinal constructs and the final grades received. In the introductory courses in animal science, soil science, and agricultural economics the junior college students had significantly higher grades. Students who took the introductory animal science course at the University had more positive attitudes, while attitudes about the courses were not significantly different between junior college and university students for plant science and soil science.

Mitchell, D. G. (1985). A study to determine attitudes, self-perceived training needs, and experience of Alabama county extension agents in the use of microcomputers. Master of Science Thesis, Mississippi State University, Mississippi State.

The purpose of the study was to determine the attitudes, self-perceived training needs, and experience of Alabama Cooperative Extension Service county academic staff in the use of microcomputers. The population was comprised of all county agent-coordinators, agricultural and natural resources agents, home economics agents, and 4-H agents. A mailed questionnaire was used to obtain the data, with responses from 269 persons for a return rate of 90.5%.

The findings revealed that training in microcomputers was a priority for the Alabama Extension agents. Further, they felt that the training should be voluntary and the responsibility for it rested with the Alabama Cooperative Extension Service. The respondents indicated that the preferred training be delivered through in-service workshops without college credit. A major problem in adapting computers was felt to be lack of funds to purchase computers and software. Among the uses studied, using the computer for programmed instructional purposes was felt to be the least valuable use, while using it to prepare mailing lists was perceived as most valuable.

MISSOURI

Birkenholz, R. J. and Harbstreit, S. R. (1985). Analysis of the inservice needs of beginning vocational agriculture teachers. Staff study, University of Missouri-Columbia.

The purpose of this study was to analyze the inservice needs of first and second year vocational agriculture teachers in Missouri. Fifty-two beginning teachers rated their need for inservice assistance in 75 topic areas. Individual topics were collapsed into eight categories for data analysis purposes. Responses were analyzed by calculating individual topic and category means. Five inservice categories labeled skill development, FFA involvement, agricultural mechanics, program develop, and SOEP supervision were found to be of greater-than-average need for beginning teachers. There appeared to be a general lack of consensus regarding the need for inservice in the individual topics assessed.

Linhardt, R. E. and McFate, K. L. (1985). Education-coordination and execution elements of variable electric use programs. Staff project, University of Missouri-Columbia.

Since one-third of our states have an active educationally oriented program supported by electric power suppliers, vocational agriculture leaders should look upon such groups as their partner. That partner, or potential partner, is often referred to as the State Electric Council or the State Food & Energy Council (FEC).

The Missouri FEC is part of a statewide group that is participating in a development project on electricity-use education. The State Department of Education has provided basic funding for training activities for vocational agriculture activities directed by the University of Missouri's inservice coordinator in agricultural education.

This program has two chief objectives, the first is to provide the latest information and new concepts about safe, efficient and timely use of electricity. Secondly, and of equal importance, is the establishment of better communications, continuing dialog and enhanced rapport with the electricially-oriented agribusiness sector which has similar goals of agricultural education and FFA--to help American agriculture become more energy efficient and economically sound.

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Mnyeu, W. M. (1985). Orientation, job satisfaction, and job performance of new extension personnel in Missouri. Unpublished doctoral dissertation, University of Missouri-Columbia.

The purpose of the study was to investigate orientation, job satisfaction, and job performance of new extension personnel in Missouri. The non-randomized sample consisted of 86 of 97 new personnel in Missouri with one to four years experience. Data were collected from two questionnaires, the Minnesota Satisfaction Questionnaire and the Orientation Program effectiveness, job performance records.

Data were analyzed by the use of descriptive statistics, correlation analyses, all possible multiple regression, and stepwise multiple regression procedures.

Conclusions were: (1) Orientation is more important to employees of an organization, like the cooperative extension service than has previously been recognized. (2) Those individuals who were highly satisfied rated their orientation program higher and had high job performance ratings. (3) Higher job satisfaction can lead to higher job performance. (4) The orientation program effectiveness varied among persons working in different subject areas.

Stewart, B. R. and Mihalevich, J. R. (1985). A feasibility study of the use of microcomputers and related software for gathering and transmitting data for the FBMA program. Staff study, University of Missouri-Columbia.

The purpose of this project was to study the feasibility of utilizing the microcomputer for gathering and transmitting farm record information to the analysis portion of the Farm Business Management Analysis (FBMA) program in Missouri. The project was designed to provide information to substantiate, as appropriate or not appropriate, the use of the microcomputer in FBMA analysis activities. Considerations were given to improving the accuracy of data submitted, the turnaround time to complete the analysis, and other factors judged to be appropriate.

After a review of existing software programs and methods for data gathering, the project advisory committee recommended that a customized program be developed for the use of gathering data on three models of microcomputers for the FBMA analysis. The customized programs were field tested and subsequently became a part of the deliverables of the project. The committee, based on reviews, recommended that available software be used for the purpose of transmitting data for the FBMA analysis.

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MONTANA

Adams, Kenneth E. (1985). Effectiveness of Selected Vocational Agriculture Public Relations Activities in Five Western States. Master's Professional Paper, Montana State University, Bozeman, Montana.

The purpose of this study was to determine the perceptions of vocational agriculture instructors in Idaho, Montana, Oregon, Utah, and Wyoming concerning the effectiveness and percent use of public relations activities.

A modified Delphi technique was used to identify public relations activities to be used in the study, and to set a standard for the frequency of use per year for each activity.

The study was a descriptive survey utilizing mailed questionnaires sent to a stratified random sample of vocational agriculture instructors in Idaho, Montana, Oregon, Utah, and Wyoming. The data obtained from the returned questionnaires (59.33%) were statistically analyzed on a microcomputer using the MSU Statistical Analysis Package (Lund, 1983).

For most of the activities, vocational agriculture instructors who used the activities had a higher percent use per year than the Delphi standard. For some activities, there were relationships between school size and availability of media and percent use and perceived effectiveness. It was also found that some activities were not used by many vocational agriculture instructors.

Gebhardt, Duane A. (1985). Characteristics Associated With Quality Supervised Occupational Experience Programs in Montana. Master's Professional Paper, Montana State University, Bozeman, Montana.

This study determined the perceptions of Montana vocational agricultural teachers teaching in departments with less than sixty percent of their students conducting supervised occupational experience programs and sixty percent or more of their students conducting supervised occupational experience programs about teacher, community, local program and parent/guardian or employer characteristics associated with students participating in supervised occupational experience programs. Teachers also responded to a list of supervised occupational experience titles indicating if they would accept them as a supervised occupational experience program for their students.

This survey was administered to Montana vocational agriculture teachers during the 1985 summer update conference.

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Characteristics used in compiling a data base were gathered by using the Delphi Technique. The returned questionnaires were statistically analyzed and used a measure of central tendency mean and the deviations from the mean standard deviation.

Populations were divided into four different groups: 1) years of experience, 2) size of school, 3) size of vo-ag program, and 4) percent FFA membership. The data gathered reveal the average teacher in the state of Montana has over five years teaching experience, teaches in a school with over one-hundred students, has a department size of less than forty students and has over seventy-five percent FFA membership.

Respondents felt that: 1) teacher commitment to supervised occupational experience programs, 2) communities understanding the FFA and supervised occupational experience program, 3) local program with extended contract for on-site instruction, and 4) parent/guardian or employer support of agricultural education were the most important factors associated with students participating in supervised occupational experience programs. Teachers also indicated that: 1) teacher success with supervised occupational experience prior to entering teaching, 2) size of community, 3) other vocational mechanical course offerings in school, and 4) parents/guardian or employer previous vo-ag experience were the least important characteristics associated with students participating in supervised occupational experience programs.

Lalum, Mark D. (1985). The Perception of Graduates of Flathead High Vocational Agriculture Program on How They Perceived the Importance of the Course of Study. Master's Professional Paper, Montana State University, Bozeman, Montana.

This survey determined how those students who graduated from the Flathead High School Vocational Agriculture Program perceived the importance of their vocational agriculture training in preparing them for entry level employment in agriculture and life in general. Data for this study were collected from 83 of the 142 graduates. Information from the questionnaires was coded and percent taught, percent not taught, mean and standard deviation were determined.

Based on the results of this study, it was concluded that 10 percent of the 60 unit titles taught in class were perceived to be very important, 51.67 percent somewhat important, 36.67 percent of average importance, and 1.67 were perceived to be of little importance. The teaching areas perceived to be most important were farm management, and mechanics. Followed by FFA

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activities, animal science, and crop science. The perceptions of graduates who were taught a particular unit within the curriculum and what was actually taught within the curriculum were somewhat different.

McMaster, Susan L. (1985). Perceptions of 4-H Members, Leaders and County Agents Toward the Montana 4-H Vegetable Gardening Projects. Master's Professional Paper, Montana State University, Bozeman, Montana.

This study determined the perceptions of 4-H members, leaders and county agents toward the Montana 4-H vegetable gardening projects. Data for the study were gathered through the use of mailed questionnaires sent to a population of 35 county agents, 60 4-H leaders and 145 4-H members. Information from the returned questionnaire was coded, entered into the CP6 Honeywell Computer and statistically analyzed with the use of the Statistical Package for the Social Sciences.

Based on the results of the study, it was concluded that skills that could be acquired through participation in a 4-H vegetable gardening project were important, use of specific vegetable gardening bulletins was low, the bulletins that had been used by the respondents were rated as being very helpful or helpful, participation in certain 4-H activities was low and goals established at the state and national level were accomplished by 4-H members. Acquiring the knowledge and developing the skills needed to care for and manage a well planned vegetable garden project were strengths of the gardening projects and too little emphasis on the basics of vegetable gardening were weaknesses of the Montana vegetable gardening projects.

Recommendations for improvement of the gardening projects included: detailed project manuals should be developed, 4-H members, leaders and county agents need to be made more aware of the vegetable gardening bulletins available and 4-H members need to become aware of the experiences in gardening projects and related activities: demonstrations, judging, tours and exhibits.

Schaff, Gary L. (1985). Microcomputer Competencies for Agribusiness in Billings, Montana, Business Area. Master's Professional Paper, Montana State University, Bozeman, Montana.

The purpose of this study was to determine perceptions of managers of agribusinesses concerning present and future microcomputer competencies needed by entry-level employees in six taxonomy areas of agriculture/agribusiness as identified in the

Billings, Montana, business area: agriculture supplies/services, agriculture mechanics, agriculture products, agriculture resources, agriculture production, and ornamental horticulture. To accomplish the purpose and objectives of this study, a stratified random sample of 40 businesses was selected from a total population of 329. Interviews were conducted using a questionnaire that was developed by the researcher. The questions on the instrument gathered information about the business and the use of 39 selected competencies. The competencies were separated into four areas: basic operations, software, hardware, and programming.

The major findings of this study were: 1) corporate agribusinesses who deal primarily in sales and service are the businesses which are most likely to be using microcomputers; 2) the most important microcomputer competencies for entry-level employees for software competencies and the least important competencies for entry-level employees are programming competencies; 3) agribusinesses are currently using computers within their business and indicate a need for employees to possess these competencies at entry level in order to be competent employees. Nineteen competencies were frequently used by three-fourths of the agribusinesses and were perceived to be extremely important, very important, or important for entry-level agribusiness employees; and 4) half of the agribusiness employees who use microcomputers daily do so one-third of the work day.

Taylor, William R. (1985). A Study to Examine Why Montana Vocational Agriculture Teachers Leave Teaching. Master's Professional Paper, Montana State University, Bozeman, Montana.

A study was devised to examine the reasons why Montana vocational agriculture teachers have left their profession between the years of 1974 and 1983. A list of past teachers was procured from the State Specialist for Agricultural Education in the Montana Office of Public Instruction. A survey developed from factors used in other studies of vocational agriculture teachers was sent to all the past vocational agriculture teachers for which addresses could be found. This survey consisted of 104 factors to be rated on a Likert scale, eight demographic factors, and two open-ended questions.

The mean Likert value was determined for each factor tested and the resulting means were then subjected to an analysis of variance procedure to determine which were significant. Frequency tables were established for the demographic data.

The majority of factors identified as influencing vocational agriculture teachers to leave the field were primarily clustered

in the salary, advancement, and administration areas, with some concern being shown for the areas of student and parental attitudes and the pressures of time. The factors found to be significant for showing the least influence on causing teachers to leave were mainly grouped in the areas of actual instruction and work with the FFA and the fulfillment and goals of the teachers themselves.

The conclusions and recommendations of the study, therefore, are that the public relations of vocational agriculture must be strengthened, especially to school boards and administrators, as well as the general public, in order that those who are in control of the conditions which are causing vocational agriculture teachers to leave might be influenced to alter those conditions. It is also recommended that present and new vocational agriculture teachers receive additional training in the areas of public and human relations, as well as how to manage time and set priorities and goals.

NEBRASKA

Barrett, Leverne and Robert Sorensen. (1985). Psychological Profiles of Agriculture College Faculties, Students by Major and Achievement. Staff Study, the University of Nebraska-Lincoln.

This study had four major objectives: (1) to identify student and faculty populations by psychological type and temperament; (2) to help students and faculty understand their diversity and possibilities of type conflicts; (3) to determine the relationship between psychological type and temperament with student behavior and (4) to help instructors develop instructional strategies which take into account student diversity.

Subjects in the study were 1820 agricultural students from Penn State University, University of Nevada-Reno and University of Nebraska; and 195 faculty from the same institutions. Students in the sample were administered the Myers-Briggs Type Indicator Form G during their attendance in classes while faculty took the same instrument as part of staff-development workshops. Additional demographic data such as class attendance, GPA, and attitude toward school were collected.

It was evident from the findings that students who major in Ag Colleges and those who teach them are quite different psychologically from faculty and students of non-Ag Colleges. Both faculty and students had more sensing than intuitive types. Students of agriculture and their faculty were different. Faculties had proportionately more intuitives than sensing types. A high percentage of sensing-perceiving students major in agriculture. The SP student may present problems for most faculty because they dislike theory and crave action. SP student's achievement was lowest.

Majors of agricultural economics and mechanized agriculture had the most SP students. All other ag majors, except natural resources and ag honors, had similar profiles; these two majors attracted the imaginative intuitive types.

Barrett, Leverne and Robert Sorensen. (1985). Learning Styles and Personality Type, A Comparative Analysis. Staff study, University of Nebraska, Lincoln

The purpose of this study was to determine if personality type factors measured by the Myers-Briggs Type Indicator were related to factors of learning, as measured by Kolb's Learning Style Inventory, and to define learning styles of Ag College students.

Subjects in the study were 435 students of agriculture at the University of Nebraska and Penn State University. Each participant in the study was administered the Myers-Briggs Type Indicator Form

G (MBTI) and Kolb's Learning Style Inventory (LSI) while attending regularly scheduled classes.

Significant differences were found in learning styles of all factors of personality type. Simply stated, extraverts and introverts have opposite learning styles. Introverts prefer to learn by using reflective observation, while extraverts preferred active experimentation. Intuitives chose abstract conceptualization as a learning style while sensors chose active experimentation. Thinkers and feelers also had opposite styles. Thinkers preferred the abstract conceptualization style and feelers strongly chose to learn in the concrete experience style.

Findings of this study help show teachers that they can no longer assume that students learn the same way and that various teaching strategies are appropriate.

Bell, Lloyd C. (1984). Program Characteristics of Semesterized Secondary Vocational Agriculture/Agribusiness Programs Which Promote Student Involvement in Supervised Occupational Experience Programs and FFA Leadership Activities. Doctoral Dissertation, The University of Nebraska-Lincoln.

The purpose of this study was to identify program characteristics of semesterized secondary vocational agriculture/agribusiness programs which promote student involvement in supervised occupational experiences and FFA leadership activities.

The design of this study utilized three data collection instruments. The first instrument was an SOEP/FFA involvement survey developed by the author. The second instrument was developed by the author and solicited SOEP and FFA program characteristics deemed necessary in a semesterized program by instructors of the cooperating schools. The third instrument, an SOEP/FFA program characteristic opinionnaire, was developed by the author as a result of the program characteristics submitted by participating instructors. A random sample of senior vocational agriculture students and instructors was drawn from a six-state area for participation in the study. The data were then analyzed to determine the means, frequencies, F-values, and t-values.

Based on the findings of the study, the following conclusions were drawn:

1. The number of semesters enrolled in vocational agriculture did strongly affect the student's involvement in SOEP.
2. The number of semesters enrolled in vocational agriculture did strongly affect the student's involvement in FFA.
3. The type of semesterized program in which a student was

enrolled did affect the student's involvement in SOEP.

4. The type of semesterized program in which students were enrolled did affect student involvement in FFA.
5. The instructor perceptions of necessary program characteristics did not affect the extent of student involvement in SOEP.
6. The instructor perceptions of necessary program characteristics did not affect the extent of student involvement in FFA.
7. The perceptions of program characteristics between instructors teaching in two-year semesterized programs and instructors teaching in programs semesterized for at least three years differed significantly on two of the 14 selected SOEP program characteristics.
8. The perceptions of program characteristics between instructors teaching in two-year semesterized programs and instructors teaching in programs semesterized for at least three years differed significantly on two of 13 selected FFA program characteristics.

Foster, Richard M. Factors Limiting Vo Ag Student Participation in SOE Programs in Nebraska. A Staff Study, Agricultural Education Department. The University of Nebraska-Lincoln.

The primary purpose of this study was to identify factors limiting student participation in SOE programs in Nebraska as perceived by Nebraska vocational agriculture instructors.

The population in this study consisted of instructors in the 136 secondary vocational agriculture programs in Nebraska. A 50% random sample (68 instructors) was selected to participate and provide date for this study. Of 68 possible respondents, 62 completed the survey instrument for a response rate of 91 percent.

A mailed survey instrument was used to collect data utilized in this study. All sections had a Cronbach Alpha Reliability Coefficient of .8254 or greater, better than the minimum alpha level of .80 discussed by Carmines and Zeller (1979).

Analysis of data included calculation of frequencies, means, and standard deviations on all items. Analysis of Variance (ANOVA) was performed to determine differences in mean importance ratings of limiting factors.

SOE-related demographic information of interest in this study included:

A. Respondents had an average of 9.9 years of experience
B. 20% were employed twenty hours or more in addition to their vo ag assignment

C. 40% had written SOE policies for their department
D. 90% of all students participated in SOE
E. 52% conducted on-site instructional visits with their students two or more times per year

The ten highest rated factors identified as limiting participation in SOE were:

-Students dislike maintaining SOE program records
-Student participation in sports is excessive
-Current loan interest rates are too high
-Money available for students to finance SOE is limited
-Agribusinesses are hiring fewer student-learners
-Parents ability to help with financing is limited
-Agribusinesses needed for placement in the community is limited
-No facilities available for nontraditional SOE programs
-Student participation in activities other than sports is excessive
-No school land-laboratory available

The five factors having the least effect on limiting SOE participation were:

-Local Education Association discourages after-school activity
-Vocational agriculture instructor has limited teaching experience
-Community attitudes about vocational agriculture are negative
-Community attitudes about SOE are negative
-Students are from affluent families; don't need the employment

NEW YORK

Agwubike, C. C. (1985). A competency based approach to the improvement of agricultural science teacher preparation programs in Bendel State of Nigeria. Doctoral dissertation, Cornell University, Ithaca.

The basic problems of agricultural education in Bendel State of Nigeria are the shortage of professionally competent teachers, and the inadequacy in teacher preparation programs. The purpose of this study is to develop the professional education competencies for the improvement of agricultural science teacher preparations in the state.

A review of literature and the study of previous research on Competency-Based Teacher Education from ERIC descriptions provided information for compiling a list of desired competencies. The list was reviewed by the Agricultural Education faculty at Cornell University. The draft instrument was field tested with the Nigerian students studying at the various institutions in the United States. The final instrument containing 104 professional competencies was administered to 150 agricultural teachers in the state to collect their views on the importance level, and their level of performance, of the competencies. The instrument for 12 administrators deals with the degree of importance to be attached to the listed competencies as well as the alternatives to be considered in making decisions concerning agricultural teacher training programs. Mean scores, standard deviations, and percentages were used in the processing of data through the computer, using the SPSS of Cornell Computer Program.

The findings of the study indicated that ninety-eight professional competencies were considered important to the teachers of agriculture. Agricultural teachers reported low performance in 45 of these important competencies. Criteria for admission considerations, students' practical experience, program evaluation, provision of physical facilities and the quality of the faculty, were identified for successful implementation of the teacher education program which is competency-based.

Bedker, Patricia Dugan. (1985). Nontraditional and traditional student learning characteristics relating to class size at the University level. Doctoral dissertation, Cornell University, Ithaca.

The emergence of increasing numbers of adult learners into the classrooms of our colleges and universities requires certain modifications on the part of these institutions. Similarities and differences between traditional and nontraditional students were studied. The primary purpose of this study was: (1) to

determine if adult learners have different learning characteristics from the traditional college student at the University level and (2) to develop a set of recommendations for identifying needs of the adult learner.

The population under study was limited to traditional and nontraditional students attending the University of New Hampshire, in Durham, New Hampshire, during the spring semester of 1983-1984 academic year. The study examined nontraditional and traditional learners in science and mathematics-related areas who enroll in associated courses numbering seventy or greater in student enrollment.

The nontraditional student population consisted of: adult full-time degree candidates; adult part-time degree candidates; and non-degree, part-time students. The total population selected for this study included 270 traditional and 158 nontraditional students for a total of 428 participants.

A questionnaire was administered to the students to obtain necessary information to describe and assess demographics, learning characteristics, preparation for college, educational barriers, evaluating teacher effectiveness and educational attainment. To assist in the purposes of this study, a chi-square analysis was performed on the data.

It was concluded that differences exist between traditional and nontraditional students in several areas. Nontraditional students identified difficulty in learning as a major problem, while most traditional students did not recognize this to be a problem. About fifty percent of nontraditional students suffered from excessive anxiety related to large class examinations while traditional students did not find this to be a problem. Nontraditional students have a lower degree of confidence in their studies than do their traditional counterparts.

Recommendations were developed from the study which would provide an effective means of meeting several of the needs of the nontraditional learner. A course to improve college teaching should be seriously considered by administrators, teaching faculty, staff and teaching assistants. New adult learners should be advised to enroll in small to medium-sized classes. When possible, alternate forms of testing students should be provided rather than relying solely on the usual type of examination.

Berkey, Arthur L. & Sutphin, Dean. (1984). Microcomputer use and related factors in New York State among agriculture teachers, post secondary teachers, and extension agents. Hatch funded research project, Cornell University, Ithaca.

The purpose of the study was to determine the extent and nature of microcomputer use by secondary and post-secondary

agriculture teachers, and agricultural extension agents in New York State in order to plan for development and further research in the area.

The specific objectives were to determine for secondary and post-secondary agriculture teachers, and agriculture extension agents: (1) characteristics of age, employment background, source of ability on microcomputers, and attitude toward use of microcomputers; the scope of students/clients served, and students'/clients' ability and attitude toward use of microcomputers; (3) institutional/agency characteristics regarding microcomputers; (4) the number by type of the hardware and peripherals used; (5) the adequacy of microcomputer hardware and software currently available for instructional and management use; (6) the funding sources for microcomputers currently available.

The design selected for the study was descriptive/correlational. The population for the study consisted of three subgroups in New York State: (a) secondary agriculture teachers (N = 333), (b) post-secondary agriculture teachers at the two-year college level (N = 151), and (c) agricultural cooperative extension service agents (N = 179). Questionnaires were mailed to the three subgroups in the population. An initial follow-up letter, and a second letter enclosing a post card to request a duplicate questionnaire. The response rates were 62 percent (206) for secondary teachers, 48 percent (73) for post-secondary, and 76.5 percent (137) for cooperative extension agents.

All three groups of agricultural educators have similar educational degrees, educational agency support, and have access to hardware and software (although extension agents do not have access to large labs). Apple and IBM are the most frequently used type of computer. Vendor and company donations, although frequently talked about, rarely make donation to the educational agencies studied in this research and should not be considered as a promising alternative to instructional funding. Commercial software packages are the primary source of software for agricultural instructional programs, but are available in limited supply. Software evaluation systems, curriculum materials related to computer use, software development, teacher inservice education and long range budgetary planning are needed to implement microcomputer assisted instruction.

Berkey, A. L. & Sutphin, H.D. (1984). Computer practices used and software needs by use category and program among agriculture teachers, post-secondary teachers, and extension agents. Hatch funded research project. Cornell University, Ithaca.

The purpose of this study was to facilitate use of microcomputers for instruction by New York agricultural secondary

teachers, post-secondary teachers, and extension agents by providing data to plan preservice and inservice courses/programs, and to develop reference materials on software needs and use. The research objectives were to identify and compare: (1) the extent to which instructional computing practices are used for teaching; (2) need for education software development of computer assisted and computer managed instruction; (3) the rank order of specific agricultural software program development needs; (4) the use of software programs within the categories of spreadsheets, data base management, and word processing and their effectiveness for audience(s) type; and (5) develop a catalog of software available by type.

The population of New York secondary school agriculture teachers (N = 333), post-secondary agriculture teachers (N = 151), and agricultural extension agents (N = 179) was surveyed using a mailed questionnaire. Based on the self-selected sample of respondents, 27% of secondary teachers, 24% of post-secondary teachers and 54% of extension agents use computers in their job, although the extent of use is seldom.

The need for software development for computer assisted instruction (CAI) and computer managed instruction (CMI) ranged from low to medium based on mean score ratings by the three groups using a four point likert scale. The greatest need for CAI and CMI software development was for problem solving and data base use respectively. Spreadsheets, database management programs and word processing programs were owned and used by 33%, 22%, and 35% of the respondents who used computers respectively. A catalog of approximately 129 programs used by the respondents was developed.

The major recommendations from the study were for courses and/or workshops on computer use, for the development and use of database and spreadsheet templates for agricultural programs, and for quasi-experimental and experimental research to explore the effects of computer use in agricultural instructional programs.

SOEP can be successfully conducted in schools and vocational agriculture programs with small and large enrollments provided necessary resources are available. The use of guidelines, implementation strategies, and appropriate resource materials increase the scope and quality of SOE which indicates that individual schools and/or states should consider adopting similar materials appropriate for the particular situation. Further research is needed on probing question about how to conduct successful SOE programs.

Berkey, Arthur L. & Sutphin, Dean. (1984). Status and importance/support for occupational experience programs as perceived by New York vocational agriculture teachers and their administrators. Hatch funded research report, Cornell University, Ithaca.

The purpose of the study was to determine the status of agricultural supervised occupational experience programs in New York State, and the attitudes of agricultural teachers and their building administrators toward SOEP in order to operationalize guidelines, implementation strategies and resource materials to improve SOEP in New York State. The specific objectives were to: (1) describe background characteristics and demographic data concerning agricultural SOEP; (2) determine the perceptions of agricultural teachers and their building administrators on the benefits, current practices, and the importance/support of selected factors related to SOEP; and to (3) compare the perceptions of agricultural teachers and their building administrators with regard to the benefits of SOEP in agriculture, and current practice and importance/support of selected factors related to a high quality SOEP.

The population for the study consisted of (a) New York secondary vocational agriculture teachers (N = 333) and (b) their building administrators (N = 210). Separate instruments were developed for vocational agriculture teachers and administrators based on a literature review and the objectives of the study. The teacher questionnaire consisted of questions on: (a) type of school; (b) teacher background in vocational agriculture, teaching experience and certification status; (c) type and scope of school laboratory facilities; (d) percentage of students in FFA; (e) type and scope of SOEP conducted; (f) teacher attitude toward the value of SOEP; and (g) current practice and importance regarding SOEP factors. The building administrator questionnaire addressed only: (a) their attitude toward the value of SOEP; and (b) current practice and their future support regarding SOEP factors.

Major findings and conclusions are that a majority of the teachers have not conducted an SOE themselves, or taken a college course which primarily addressed SOE. Teachers do not have written policies or plans for conducting a SOE in their schools, or stress recordkeeping to class, but perceive SOE is an important component of the program. Administrators perceive SOE more important than teachers, although they are less supportive of practices that require a commitment of school funds. Adoption of state guidelines and procedures along with inservice programs is recommended. Periodic replication of the study is needed to monitor the status of SOE in New York State.

Penrod, K.M. (1984). Supervised occupational experience assessed in terms of a theory of education. Doctoral dissertation, Cornell University, Ithaca.

The recent de-emphasis of supervised occupational experience (SOE) in New York State was studied by identifying factors that teachers, students and administrators perceived as having either inhibiting and/or enhancing influences on this part of a vocational agricultural program.

Inhibiting and enhancing factors are identified using two research methods. A survey instrument was mailed to all vocational agricultural teachers in New York State to determine current statewide status of SOE and the perceptions of vocational agricultural teachers regarding inhibiting and/or enhancing factors. Nine teachers and 35 students in vocational agricultural programs at nine typical schools in central New York plus the school principals were interviewed to determine additional characteristics of SOE programs. The student's perception of their SOE experience was important to the study of meaningful student learning regarding SOE program participation.

Findings, conclusions and recommendations are based on the data gathered using both the survey and interviews. In New York State less than 30 percent of students in high school vocational agricultural programs have SOE projects, these students report that they enjoy their projects, do not generally keep their records in a consistent format, do not typically have written plans, and more often ask their parents or employers rather than their vocational agricultural teachers technical questions related to their project activity. Six major conclusions relate to each teaching, learning, curriculum, governance, naturalistic inquiry and a theory of education.

Recommendations include the need for more student-teacher interaction time than is presently used for SOE project activity, for written SOE project contracts, for in-class discussion regarding students' projects and for specific evaluation criteria to enhance meaningful student learning as a result of SOE project participation.

Sutphin, Dean. (1985). Application of microcomputers and need for computer competency development perceived by New York State agricultural secondary and post-secondary instructors and extension agents. Hatch funded research project, Cornell University, Ithaca.

The purpose of this study was to design a preservice and in-service model for agricultural educators by identifying the instructional uses of microcomputers and the competencies needed to implement the technology in secondary, post secondary and

extension level agricultural instructional programs. For secondary, post secondary and extension level agricultural instruction programs, the specific objectives were to: (1) compare the extent to which categories of microcomputer use are similar among agricultural education; (2) determine the importance of competencies needed to use microcomputer technology; (3) compare the ratings among the three groups on competencies needed to use microcomputers; (4) recommend preservice and inservice activities which are appropriate individually and collectively for the three groups of agricultural educators.

A questionnaire developed by the researcher was a refinement on existing instrument development by Hudson (1983). The questionnaire was validated by a panel of 16 experts and field tested to establish reliability prior to data collection. Ninety-two secondary teacher, 36 post-secondary teacher, and 97 extension agent microcomputer users responded to the survey from the respective populations of agricultural educators. Pearson product correlation coefficients and mean scores were used to determine relationships between perception of the groups and to rank the importance of competencies respectively.

A low level of relationship ($r = .00$ to $.29$) was found between the categories within computer assisted instruction and computer managed instruction. The extent of use for all categories ranged from seldom to never. Fifty competencies were rated in terms of importance. The competencies were categorized in four sections including "general", "programing", "hardware" and "software" which received composite mean scores of 2.70, 1.90, 2.62, and 2.93 respectively. Low correlation coefficients were found between the groups for all but five competencies for which a moderate level of relationship was found ($r = .30$ to $.49$). Based on predetermined levels for mean score ratings, 21 competencies were recommended for development at the undergraduate level for all three groups, 13 were recommended as high priority inservice for at least one of the groups while 18 competencies were considered low priority for two or more groups.

Although statistically low levels of association were found among the microcomputer competency needs of the three groups of agricultural educators investigated, mean scores fell within a range sufficient to recommend a core curriculum for the development of microcomputer competencies at the undergraduate and to some extent the graduate/inservice level. Implementation of such a curriculum was recommended as well as replication of this study as educational computing technology develops.

Whaley, D.C. (1985). Agricultural advisory committees as change agents: Their characteristics and influence in California vocational agriculture program. Doctoral dissertation, Cornell University, Ithaca.

The descriptive study was an investigation of agricultural advisory committees in California. The investigation determined if measurable influence on school personnel was taking place as a result of advisory committee action. Influence was measured by determining the degree to which advisory committee recommendations formulated by agricultural advisory committees were solicited in order to define current directions for vocational agriculture.

The research methodology incorporated a multistage sampling technique. The status and types of agricultural advisory committees were mailed to all head teachers of vocational agriculture programs in California. The characteristics, influences, and significant recommendations of advisory committees were determined through a final questionnaire mailed to 100 head teachers, 100 school principals, and 100 advisory committee chairpersons associated with a random sample of agricultural advisory committees.

Organized and active advisory committees were reported by 77.4 percent of all respondents. Committee members were representative of a cross section of agricultural employment opportunities in the communities and, as individuals, were influential in their communities.

The significant recommendations formulated by advisory committees emphasized the committees' primary focus on the high quality and the vocational nature of agricultural instruction in California. Recommendations addressed, among others, the topics of curriculum revision, school farm development, equipment needs, and science credit for vocational agriculture classes.

Analysis of the data revealed that agricultural advisory committees were only somewhat to moderately influential with school personnel. The data also showed a significant relationship between specific characteristics of the committees and the influence of the committees. These characteristics, among others, included: (a) the extent to which committees performed a worthwhile function and (b) the extent to which advisory committees used selected practices to influence school personnel.

Wood, Jeffrey A. (1985). Development and experimental evaluation of a microcomputer based software package for record-keeping in SOE. Doctoral dissertation, Cornell University, Ithaca.

A ten week experimental study using the pretest-posttest control group design was conducted with 435 students in fifteen vocational agriculture classes in New York State during the fall, 1984. The purpose of the study was to determine the effectiveness of a microcomputer based software program for keeping supervised occupational experience (SOE) records which was developed by the researcher. Three research hypotheses were tested using intact classes which were randomly selected to include an experimental group of 218 pupils and 8 teachers and a control group of 217 pupils and 7 teachers.

The experimental group used the microcomputer based SOE recordkeeping program and those in the control group were asked to keep SOE records in the traditional non-microcomputer based manner. Pretest assessments of student attitude toward and knowledge of SOE and teacher attitude toward SOE were measured by instruments reviewed by a panel of experts and were field tested with students and teachers randomly selected from the population but who were not included in the study. Posttest and pretest instrumentation were identical except for random rearrangement of questions. Student and teacher demographic data related to SOE in agriculture were collected prior to the experimental phase of the study.

Teachers in the experimental group evaluated the microcomputer based SOE recordkeeping software after the termination of the experiment.

Results of t statistics failed to provide sufficient evidence to reject any of the research hypotheses, thus indicating that for the groups under investigation in this study the microcomputer based SOE recordkeeping software was as effective as traditional non-micrcomputer based methods and materials for keeping SOE records where student and teacher attitude toward SOE and student knowledge of SOE are concerned. Furthermore, teachers in the experimental group indicated that the software was effective, efficient, well documented and easy to use.

A serendipitious finding revealed a bimodal distribution of the student posttest SOE knowledge scores for the experimental group. A single class was found to be responsible for the bimodal distribution, however subsequent interviews with the instructor revealed no apparent teacher, student or school uniqueness or difference which could be attributed to the class scoring higher than the other experimental or control groups. This unexpected finding indicated certain indiscernible factors positively effect student learning, especially knowledge concerning SOE.

Recommendations for the use of the researcher developed microcomputer based SOE recordkeeping software and areas for future research were based on the findings.

NORTH CAROLINA

Adams, William Howard, Jr. (1985). Occupational competencies needed for entry-level employment as agricultural equipment mechanics for maintaining and repairing tractors, crop combines (grain and corn), and balers. Doctor of Education Thesis, North Carolina State University, Raleigh, North Carolina.

The purpose of this study was to determine the entry-level occupational competencies needed for employment as an agricultural equipment mechanic for maintaining and repairing tractors, crop combines (grain and corn), and balers.

A mail survey was sent to a random sample of 100 North Carolina dealerships drawn from the 1983 Membership Directory of the Carolina Farm and Power Equipment Dealers Association, Inc. A follow-up mailing was made, and a 10% random sample telephone follow-up was conducted. Responses were received from 45 dealership managers (45%) and from 35 agricultural equipment mechanics (35%) which represented an acceptable return rate for the 95% confidence level and .45 accuracy level selected for the study.

Analysis of variance and t-statistics were used to determine if significant differences existed in the occupational competency ratings when respondents were categorized by: (a) current job title as dealership manager or mechanic, (b) size of dealership as determined by the number of mechanics employed at the dealership, or (c) years of experience in their current job assignment. No significant differences were found.

Some of the findings drawn from the study were:

1. All but one of the 278 competencies were found to be relevant to the job of agricultural equipment mechanic. The only item rated as irrelevant was "stock self-service shelves."

2. Of the 20 competencies rated as very important, nine referred to tractor diesel and gasoline engines, ten related to safety practices or procedures, and the twentieth competency was "read and understand directions."

3. Significant differences were observed among competency mean ratings when respondents were categorized according to: (a) job title, (b) size of dealership, and (c) years of experience.

Price, Larry E. (1985). Perceptions of former state FFA officers in the southern region of the United States toward the profession of teaching vocational agriculture. Master of Science Thesis, North Carolina State University, Raleigh, North Carolina.

The purpose of this study was to determine the perceptions former state Future Farmers of America officers had toward the profession of teaching vocational agriculture. A survey instrument using a five-point scale was implemented to determine the perceptions participants had as to whether teachers receive an adequate salary, have adequate job security, have prestige in their communities, have good working conditions, have a high sense of accomplishment on their jobs, have good working hours, have adequate opportunity for career advacement, have discipline problems, receive adequate support from the community, receive adequate support from their school administrators, are satisfied with their jobs, and whether teaching vocational agriculture is a stressful occupation.

The population consisted of 752 former state FFA officers from the Southern Region who served from 1971-80. The sample consisted of 246 or 32.71% of the population. Responses were received from 154 (62.6%) of the sample.

The data were analyzed by grouping the sample response in two groups, former state FFA officers who were currently teaching vocational agriculture and those who are not teaching. The SAS NPARIWAY procedure was used to run Wilcoxon statistics on the data. Significant differences were found in the perceptions of the two groups toward the stress level, discipline problems and the adequacy of salaries vocational agriculture teachers receive.

No significant differences were found in the two groups perceptions toward the adequacy of job security, administrative support, advancement of opportunity, community support, working conditions, job satisfaction, sense of accomplishment, prestige in the community and working hours of vocational agriculture teachers. No significant differences were found in the two groups perceptions toward the statements, a desire to work with the FFA, a desire to work with young people and interest in vocational agriculture causes some people to become vocational agriculture teachers.

Schroeder, Marie E. (1985). The cooperative relationship between vocational agriculture teachers and county extension agents in North Carolina. Master of Science Thesis, North Carolina State University, Raleigh, North Carolina.

The purpose of this study was to determine the amount and types of cooperation that occur between vocational agriculture teachers and county extension chairmen in North Carolina. The sample consisted of 194 or 49.7% of the teachers and 80 or 80.0% of the extension chairmen.

The two samples were sent the same questionnaire. The first section of the instrument listed various factors which influence cooperation. The participants responded using a

five-point scale as to whether the factor had a negative or positive effect on cooperation. The second section of the instrument asked each group their perceptions on the appropriateness and occurrence of various cooperative activities. Sixty-eight percent (132) of the vocational agriculture teachers responded, and 78 (97.5%) of the county extension chairmen responded.

Data from the first section of the instrument were analyzed using a t-test. SIgnificant differences were found between the two groups as to the effect the factors of "colleague's years of experience," "educational background of colleague," and "instructional methods," had on cooperation.

A chi-square test was used to analyze data obtained from the second section of the instrument. There were significant differences in the perceptions of the two groups, as to the appropriateness of the activities "participate in joint in-service training," "share publications," "share teaching materials," "conduct fund raisers," "organize demonstration plots," and "conduct adult classes." Difference, significant at the .01 level, were also found in the perceptions of the occurrence of the cooperative activities: "participate in joint in-service training" and "share teaching materials."

Using the phi coefficient of correlation and the Fisher z test of significance, significant positive correlations existed between the appropriateness and occurence of all but three of the cooperative activities as perceived by vocational agriculture teachers and county extension chairmen.

NORTH DAKOTA

Lipetzky, Thomas E. (1985). Cash/Futures Price Relationships of Live Hogs for North Dakota. Master of Science colloquium paper. North Dakota State University, Fargo.

Determination and analysis of the live hog basis in North Dakota will assist producers in formulating basis estimates for hedging strategies. Objectives were to identify historic cash - futures price relationships for live hogs in North Dakota and to analyze the variability of differences in West Fargo live hog cash prices and Chicago Mercantile Exchange live hog futures prices.

The nearby period basis was determined and analyzed for the period January, 1979 to December, 1983 using the traditional method of calculation (cash price minus futures price). Basis means were analyzed according to four groups based on time. These groups were contract month; delivery month and month prior to delivery; individual weeks prior to maturity; and year.

The basis values by year exhibited significant differences over the five-year priod, 1979 favorable mean basis as analyzed by the nearby period of the individual contract months is the April contract. However, analysis of the basis by weeks prior to delivery of the individual contract months indicates that both the August and October contracts have a narrower basis and; therefore, possess a greater opportunity for hedging due to appreciation in the basis. The basis means by week prior to contract maturity reflected a narrowing basis from six weeks to three weeks prior to contract maturity before widening in week two through the contract delivery week.

Basis means of delivery months were generally narrower than the means of the months prior to delivery, with the exception of the April and August contracts. Standard deviations usually decreased during the delivery month.

Meester, Anneus D. (1985). Survey of Policies, and Perceptions of North Dakota Vocational Agriculture Advisory Councils. Master of Science Colloquium Paper. North Dakota State University, Fargo.

The major purpose of this study was to determine practices used in operating local North Dakota Agricultural Advisory Councils and to examine perceptions of the Vocational Agriculture council chairpersons and instructors concerning council's

operation and effectiveness.

A survey questionnaire was developed and personally delivered to secondary Vocational Agriculture instructors at the North Dakota State FFA Convention. Those instructors not contacted, along with the agriculture advisory council chairpersons, adult farm management instructors, and post-secondary instructors were mailed questionnaires. Two follow-up mailings were used to improve the response rate for all questionnaires. Five additional advisory council chairpersons who failed to return a questionnaire were contacted by phone to compare their response with respondents. Their responses were found to be similar to findings of the respondents.

Respondents generally perceived that important practices and policies were being observed. Advisory council chairpersons reported the observance of some of these practices and policies in fewer cases than did the teachers. This may indicate a need for better communication between school personnel and council chairpersons. Most of the teachers and chairpersons regarded the councils as effective. There were enough low ratings to indicate a need for improvement. The responses indicated that an orientation workshop would be useful.

Melin, Thomas L. (1985). Perceptions of County Commissioners Toward the Minnesota Extension Service. Master of Science colloquium paper. North Dakota State University, Fargo.

The major purpose of this study was to determine the perceptions of County Commissioners toward the Minnesota Extension Service at both the county and state levels. Specific objectives were to determine the perceptions of County Commissioners toward: 1) the quality of County Extension Service programs conducted in the counties; 2) their working relationships with County Extension staff; their working relationships with State Extension staff and 4) differences according to county population, length of service and extension committee involvement.

Two county commissioners were randomly selected from each of the 89 counties in Minnesota for a sample of 174. A questionnaire was developed to gather data examining the perceptions of the commissioners toward the quality of county extension programs and the working relationships between commissioners and the county and state extension staff. The response rate was 79.3 percent. Chi square was used to test for differences in perceptions according to county population, length of service and involvement on county extension committees.

County commissioners had generally favorable impressions of the quality of county extension programs. The response was slightly less favorable for community and natural resource development than for the other program areas.

The county commissioners had generally favorable working relationships with county extension staff. Their relationships with state extension staff were rated somewhat lower. This may be due to distance involved between them.

No differences in perceptions were found based upon the variables of county population or length of service. Significant differences were found for two items for the variable of county extension committee involvement. Those with such experience viewed the working relationships more favorably.

Olschlager, Bryan K. (1985). Perceived Retraining and Upgrading Needs of Managers in Five Selected North Dakota Agribusiness Industries. Master of Science colloquium paper. North Dakota State University, Fargo.

The major objectives of this study were to 1.) determine managers perceptions of the importance of selected managerial competencies, 2.) compare differences in the perceived importance of management functions according to the managers' age, years of experience, level of education, time spent managing, and type of industry, 3.) determine managers perceptions of their improvement needed in selected managerial competencies, and 4.) compare differences in the perceived improvement needed in each management function according to the managers' age, years of experience, level of education, time spent managing, and type of industry.

Direct mail questionnaires were developed and mailed to a sample of 50 managers in each of the following industries: implement, grain, meat processing, dairy processing, and horticultural related. Two additional mailings to nonrespondents were utilized to improve response rate. A telephone follow-up and mailing back of the entire questionnaire for completion were two methods used to verify and complete answers to questions to gather the most accurate data possible.

Management skills were ranked by managers according to their perceived importance and the amount of improvement they felt they needed in each skill. Analysis of variance and Duncan's Multiple Range Test were implemented to detect and measure any significant differences that occurred within the variables mentioned in the

objectives.

Many of the management skills were perceived by managers as being either essential or important to their success, indicating that these skills could be used to develop a curriculum for a management training course. The need for improvement in a majority of the management skills was determined to be either moderate or extensive by at least one-third of the managers. Even though significant differences did occur when comparing skills among some variables, these differences appear small enough to enable managers in all five industries to enroll in a common management training program.

Pelton, Kent J. (1985). Perceptions of North Dakota Vocational Agriculture Students Toward Supervised Occupational Experience Programs. Master of Science colloquium paper. North Dakota State University, Fargo.

The purpose of this study was to determine perceptions of North Dakota Vocational Agriculture students toward Supervised Occupational Experience (SOE) Programs. The specific objectives were 1) to determine perceptions of the value of SOE programs 2) to compare the perceptions of the value of SOE programs by place of residence 3) to determine perceptions of the importance of selected aspects of SOE programs and 4) to compare perceptions of the importance of selected aspects of SOE programs according to place of residence.

Twenty North Dakota Vocational Agriculture Departments with well organized SOE programs were selected for this study. A questionnaire which had been developed and pilot tested was administered by the Vocational Agriculture teachers in these departments. Students who were juniors or seniors and in their third or fourth year of Vocational Agriculture were included in the study. All selected schools participated and 381 questionnaires were completed.

The North Dakota Vocational Agriculture students perceived their Supervised Occupational Experience Programs to be valuable. These students perceived the various selected aspects of SOE programs to be important. The students that lived on a farm or ranch tended to perceive the aspects of SOE programs as being more important than did students who lived in a town, city or rural area other than a farm.

Zidon, Mark G. (1985). Assessment of the Use of Microcomputers in North Dakota Secondary Vocational Agriculture Departments. Master of Science colloquium paper. North Dakota State University, Fargo.

The purpose of this study was to determine the extent microcomputers were being used by North Dakota secondary vocational agriculture teachers in their instructional programs. The population consisted of 91 secondary vocational agriculture teachers in North Dakota. A questionnaire was developed and sent to each teacher. All 91 teachers returned the questionnaires. Respondents were contacted by phone or in person to clarify information. Once information was clarified, all returned questionnaires were usable. Frequencies, percentages and mean scores were determined in analyzing data.

Use of microcomputers by North Dakota secondary vocational agriculture teachers was relatively new. Two-thirds of the teachers had less than two years experience in using microcomputers. Microcomputers were located in more than two-thirds of the vocational agriculture departments. They were available for use by vocational agriculture teachers in all but two schools.

Teachers perceived farm business management as the most effective instructional unit in which microcomputers were best used. They use microcomputers most often in this unit. Considering computer managed instruction, teachers used word processing most often.

Not having purchased software was the most cited frequent reason for not using microcomputers more for computer assisted instruction and computer managed instruction.

OHIO

Barrick, R. K. & Deeds, J. P. (1985). Course evaluation based upon course objectives and student final grade. Staff study. The Ohio State University, Columbus.

The purposes of the study were to identify the extent of relationship between course grade in Agricultural Education 290 and related demographic attributes of students and to identify the proportion of variance in final grade attributed to scores on individual assignments. A total of 893 students were included in the study.

No significant relationships were found to exist between student grade in the course and the demographic variables except quarter of enrollment. Students who were enrolled Winter Quarter received significantly higher grades than students enrolled Spring Quarter.

The largest portion of variance (41%) in the students' final course grade was attributed to the grade on the major project in the course. In-class assignments (22%) and score on the final examination (13%) were the two other major contributors to variance in final course grade. The other five scores combined contributed less than 12% of total variance.

Betts, S.I. (1985). High-ability urban high school seniors' perceptions of agricultural study and selected recruitment strategies. Master of Science Thesis, The Ohio State University, Columbus.

The purpose of this study was to determine high-ability urban students' perceptions of agriculture, agricultural study and careers, and selected recruitment strategies. Random sampling was used and data were collected via a mailed questionnaire. High-ability urban students lack knowledge regarding agriculture; therefore, their perceptions are partially accurate but unclear overall. They prefer personalized recruitment strategies. Guidelines for recruiting high-ability urban students were formulated based on the findings.

Deeds, J. P. (1985). Relationships between attitudes of pre-service agricultural teacher education majors and variables related to early field-based experience. Ph.D. dissertation. The Ohio State University, Columbus.

The purpose of the study was to ascertain the extent of

relationship between demographic variables, such as enrollment in vocational agriculture, participation in FFA and participation in Agricultural Education Society, and attitudes of pre-service teachers toward themselves as teachers and toward teaching. The study included an examination of the relationships between attitudes of pre-service teachers and factors associated with early field-based experiences, such as attitude of the cooperating instructor, quality of the program and extent of professional activities completed.

Findings indicated the following: (1) there was no difference in attitude between early field-based experience participants and the comparison group; (2) a negligible relationship existed between attitude of pre-service teachers and attitude of cooperating teachers; (3) a moderate relationship existed between pre-service teacher attitude and program quality; and (4) low relationships existed between attitude of pre-service teachers and FFA participation, AES participation and completion of high school vo-ag.

Bragg, D.D. (1985). Entry and termination of postsecondary vocational-technical education by the high school class of 1972. Ph.D. dissertation, The Ohio State University, Columbus.

The purpose of this study was to describe the ways individuals entered and terminated postsecondary vocational-technical education (PSVE). Then, the study determined to what extent entry and termination were predicted by individual characteristics, family characteristics, educational aspirations, the education level and aspirations of parents, high school curriculum, academic ability, early employment experiences and enrollment characterstics.

The research design for the study was descriptive. A documentary analysis of the National Longitudinal Study of the High School Class of 1972 (NLS-72) was employed. Longitudinal data collected from 1972 through 1979 on 22,652 individuals who were high school seniors in 1972 were the data source for this study.

One-fifth of NLS-72 respondents who completed high school later entered PSVE. An equal proportion of 4,627 NLS-72 completers entered PSVE immediately and delayed entry. NLS-72 completers who entered PSVE typically were white, middle SES females who aspired to attend vocational-technical schools or beyond, had studied a general high school curriculum and had middle-level class rank percentiles. Groups of NLS-72 completers who entered PSVE were compared to NLS-72 respondents who never entered postsecondary education. A regression analysis revealed that statistically significant predictors of immediate entry into SVE were sex, SES,

academic ability, educational aspirations, and the education level and aspirations of parents. A regression analysis indicated that the group of NLS-72 completers who delayed entry into PSVE were not different from NLS-72 completers on individual characteristics and educational aspirations, however the education level and aspirations of parents were predictors of delayed entry into PSVE.

Over 80 percent of NLS-72 completers who entered PSVE were enrolled only one year. Of the 3870 NLS-72 completers who terminated PSVE from 1972 through 1979, two-thirds left PSVE without obtainng a degree, license or certificate. Approximately 23 percent of NLS-72 completers obtained a license or certificate, and another 9 percent obtained an associate or vocational degree. A regression analysis indicated that statistically significant predictors of completion of PSVE with a degree, license or certificate were immediate entry, enrollment duration, hours enrolled per week in class and hours employed per week.

Clark, R.W. (1985). Burnout and associated factors among administrators/mid-managers of the Cooperative Extension Service in the North Central region. Ph.D. dissertation, The Ohio State University, Columbus.

The objectives of the study were to (1) determine the level of burnout, job satisfaction, personal strain, occupational stress, and personal coping resources of Associate Directors, Assistant Directors, and District Supervisors of the Cooperative Extension Service in the North Central Region, (2) determine the extent of association between burnout and personal characteristics, job satisfaction, personal strain, occupational stress and personal coping, (3) determine if differences in levels of burnout exist among Associate Directors, Assistant Directors, and District Supervisors.

A mailed questionnaire was sent to Associate Directors (N=19), Assistant Directors (N=36) and District Supervisors (N=67) located in eleven states in the North Central Region. This represented a census of the population. A 100 percent response rate was obtained. Parameters were used to describe the population in terms of personal characteristics, job satisfaction, occupational stress, personal strain, personal coping resources and burnout. Spearman coefficients were used to describe the population correlations (Rho) between personal characteristics, job satisfaction, occupational stress, personal strain, personal coping resources and burnout.

A low-to-moderate level of burnout was present among administrators/mid-managers of the Cooperative Extension Service in

the North Central Region. Approximately 20 percent of the District Supervisors and Assistant Directors experienced high levels of burnout (emotional exhaustion). Approximately 30 percent of the Associate Directors experienced high depersonalization scores.

Low-to-moderate negative relationships were found between job satisfaction and burnout while moderate to substantial positive relationships were indicated between occupational stress and burnout. A moderate to very strong positive relationship existed between personal strain and burnout. A low-to-moderate negative relationship was found between personal coping and burnout.

The majority of administrators/mid-managers experienced low-to-moderate levels of burnout. A sizeable percentage of District Supervisors and Assistant Directors experienced high burnout and need attention related to on-the-job emotional exhaustion while Associate Directors needed assistance related to depersonalization of clientele.

As occupational stress and personal strain increase, the level of burnout increases. As job satisfaction and personal coping increase, the level of burnout decreases.

Green, J.W., Jr. (1985). Professional competencies needed by trainers in agribusiness. Ph.D. dissertation, The Ohio State University, Columbus.

The purpose of this study was to investigate the following objectives: 1. identify the educational and occupational competencies agribusiness trainers perceived necessary; 2. identify the educational and occupational characteristics possessed by agribusiness trainers; 3. identify the characteristics of agribusiness relating to training; 4. compare the competencies required by agribusiness trainers with those of vocational agriculture teachers; 5. establish the relationship of agribusiness trainer characteristics and the perceived importance of professional competencies; and 6. establish the relationships between trainer and/or organization characteristics and trainers' perceptions of the competencies. The study was conducted in 1985 by surveying all 139 members of the American Society for Training and Development Special Interest Group in Agriculture residing in the United States and Canada. Individuals were instructed to complete the questionnaire if their primary responsibility was training in agribusiness. The instrument utilized related competency studies in training and vocational education aided by a panel of qualified experts. The questionnaire contained 44 professional competency terms measured with a six-point Likert-type scale. The Cronbach alpha reliability for these items was .95. Twenty additional terms were included to gather demographic data on agribusiness trainers

and their organizations. Data were analyzed using descriptive statistics procedures, including correlations, and a one way analysis of variance. The findings were discussed by competency domains. Every domain ranked as high in importance. Antecedent data provided information regarding agribusiness trainers and their programs, e.g. training needs are largely determined by subjective means. Trainers were well educated and experienced with preparation in either agriculture, education, or business. Training competencies and demographics did not exhibit strong associations and the analysis of variance did not detect a significant difference in trainer backgrounds and how they valued that experience. The researcher determined that agribusiness trainers and vocational agriculture teachers share many comparable competencies.

Kwarteng, J.A. (1985). Ohio 4-H agents' and volunteer leaders' perceptions of the volunteer leadership development program. Master of Science Thesis, The Ohio State University, Ohio.

This study considered the perceptions of 4-H agents and volunteers leaders in the following six areas identified under the volunteer leadership development program: recruiting, training, motivations, recognition, retention, and supervision.

The Objectives of the Study were: to describe 4-H agents and volunteer leaders in Ohio on the following characteristics: age, sex, years in 4-H work, employment status, level of education, residence, status, and income; to describe the level of importance of six 4-H volunteer leadership development program areas as perceived by 4-H agents and volunteer leaders in Ohio; to determine if differences existed between 4-H agents and volunteer leaders on their perceptions of the level of importance of the six 4-H volunteer leadership development program areas; to investigate the relationship between demographic characteristics of respondents and their perceptions of the level of importance of the six areas.

The populations for this study were Extension 4-H agents and 4-H volunteer leaders in the State of Ohio. A random sample of ten 4-H agents and 320 volunteer leaders was drawn from ten stratified and randomly selected counties and served with mail questionnaires.

A total response of 10 (100%) and 201 (62.8%) for 4-H agents and volunteer leaders respectively was received from the main study. Measures of central tendency, percentage distributions, frequencies, t-tests of significance, Pearson correlation coefficients, Spearman rank order correlations, and point biserial correlations were employed in the analysis of the data to provide answers to the six objectives of the study.

No significant differences were found between 4-H agents and volunteer leaders on their perceptions of recruiting, training, and supervision. However, significant differences existed between them on their perceptions of recruiting, training, and supervision. However, signficant differences existed between them on their perceptions of motivation, recognition, and retention.

Miller, J.E. (1985). The relationship between the extent to which a county is rural or urban and characteristics of the county's 4-H program. Ph.D. dissertation, The Ohio State University, Columbus.

The purpose of this study was to investigate the extent to which the current 4-H program in Ohio is serving urban clientele in the counties. This was accomplished by studying the relationship between characteristics of the county indicating the degree to which it is urban or rural with the characteristics of the 4-H program offered in the county.

The sampling units for this study were the 88 counties of Ohio and the sources of data were the 1980 Census Data, the Ohio 4-H Statistical Report, October 1, 1982 - September 30, 1983, Extension's Annual Narrative Reports," July 1, 1982 - June 30, 1983, and the "Ohio Cooperative Extension Service - Local Needs Survey."

The conclusions of this study are that Cuyahoga, Hamilton, Franklin, Montgomery, Lucas and Summit counties have 90% or higher urban population and a total of 31 counties have 50% or higher urban population. There is a very strong negative relationship between the extent to which the county is urban and the percent of potential 4-H members reached. There is a low positive relationship between the extent to which the county is urban and the percent of females enrolled in the program. There is a moderate relationship between the extent to which the county is urban and the percent of non-white 4-H members enrolled in the program. There are moderate to substantial negative relationships between the extent to which the county is urban and the percent of 4-H members residing on farms and in small towns. There is a substantial relationship between the percent to which the county is urban and the percent of 4-H members residing in suburbs and central cities of over 50,000 people. There are negligible negative relationships between the extent to which the county is urban and the percent of 4-H members enrolled in clubs and school programs. There is a low positive relationship between the extent to which the county is urban and the percent of 4-H members enrolled in special interest groups.

There are no consistent relationships in direction or magnitude between the characteristics of the 4-H program and the program users' perceptions about the degree of emphasis that should be placed on selected 4-H program areas.

Uko, O.E. (1985). Perceived farm management educational needs of part-time and small scale farmers in selected Ohio counties. Ph.D. dissertation, The Ohio State University, Columbus.

Many part-time and small scale farmers (PT/SF) have been facing problems in farming. To help solve these problems, this study was conducted to determine the farm management educational needs of PT/SF within selected Ohio counties. The following objectives were pursued: 1) to describe PT/SF on the basis of their demographic characteristics; 2) to determine the farm management educational needs of PT/SF in this study; 3) to determine the relationship between the demographic characteristics and the computed farm management educational needs of PT/SF studied; and 4) to determine if the farm management educational needs of PT/SF in non-commercial counties were significantly different from that of PT/SF in commercial counties. This study was a descriptive survey research. The target population was the PT/SF in selected Ohio counties. An appropriate sample (Elliott, 1980), for a 95 percent confidence level and a 5 percent margin of error was selected. The instrument used to contact PT/SF in this study was a researcher-developed mailed questionnaire which employed a summated (Likert-type) scale for the measurement of the perceived educational needs of farmers. Findings revealed the four most needed areas of farm management education by PT/SF in the study as being: 1) farm tax management; 2) marketing farm products; 3) determining farm insurance needs; and 4) farm recordkeeping.

With these four categories of educational needs, the 12 most needed competencies were prioritized to include: 1) determination of how local inheritance tax is paid; 2) determination of when to market products; 3) filing of the appropriate tax forms; 4) analysis of methods of marketing products; 5) interpretation of market reports; 6) making a state income tax return; 7) comparison of storage cost with selling at harvest; 8) determination of how to report federal income tax; 9) determination of the appropriate tax preparatory procedures; 10) determination of what property to insure; 11) following product price trends; and 12) determination of the appropriate time to insure.

Findings also revealed that the majority of PT/SF were males who operated model farms of 50-150 acres for 11 or more years, and

were between 35-44 years of age. They were high school graduates who had principally produced crops.

Van Tilburg, E. (1985). Factors associated with the turnover intentions of Ohio Cooperative Extension county agents. Ph.D. dissertation, The Ohio State University, Columbus.

The purpose of the study was to determine the relationship between various factors and the turnover intentions of the Ohio Cooperative Extension county agents. The study was based on the March and Simon theory of job turnover. Independent variables included: (1) perceived desirability of staying (overall job satisfaction, satisfaction with pay, promotion, co-workers, the work itself, and supervision); (2) perceived ease of movement; (3) self-rating of job performance; (4) supervisor rating of job performance; (5) perceived job performance-extrinsic reward contingency; (6) perceived job performance-intrinsic reward contingency; (7) age; (8) tenure in the job; and (9) major program responsibility area. The dependent variable was intention to leave the job.

Data for the study was gathered in May, 1985, by two methods: (1) a three-part questionnaire; and (2) examination of personnel records of the Ohio Cooperative Extension Service. The population consisted of all Ohio Cooperative Extension Service county agents (N=244). Findings and conclusions were based on a data sample of 218 agents (89 percent response rate). The population was assumed to be a sample of Ohio Cooperative Extension Service county agents on the job at other points in time, thus, permitting the use of inferential statistics.

Descriptive statistics were used to organize and summarize the data. Analysis of variance was performed to compare groups on selected variables. Correlational and regression techniques (multiple, moderated, and stepwise regression, Pearson product moment correlation) were used to determine the direction and magnitude of relationships and the amount of unique and total variance accounted for among variables.

Findings suggested that agents generally had low intentions to leave the job. They experienced moderate levels of job satisfaction, and perceived ease of movement. Most perceived themselves to be high performers, and generally, their supervisors agreed. Lower performers, however, had higher intentions to leave the job. Agents tended to reward themselves for good performance but did not see that organizational rewards were contingent upon performance level.

4-H youth agents had significantly lower levels of job satisfaction, satisfaction with pay and with the work itself.

They also had lower perceptions of performance-contingent rewards. The set of best predictors of the dependent variable included: overall job satisfaction, satisfaction with co-workers, age, and self-rating of job performance.

Wessel, J.A. (1985). Critical elements of the state Extension specialist position. Ph.D. disseration, The Ohio State University, Columbus.

The State Cooperative Extension Specialist must relate effectively to county extension programs and clientele and to the university academic environment. As a result, extension specialists encounter conflicting expectations about their functions and roles.

A job analysis was undertaken to define the specialist's position. The purposes of the disseration were to document the critical elements of the job responsibilities for state extension specialists, to determine relative agreement between specialists and direct supervisors about the importance of the job responsibilities and to describe relationships of ratings of importance with various aspects of the appointment. The target populations were state extension specialists and direct supervisors responsible for evaluating state extension specialists in the Ohio Cooperative Extension Service.

The critical incident technique was used to identify 412 critical incidents described by 72 state extension specialists. In addition, interviews were conducted with 18 direct supervisors to assist in forming a composite picture of the behavioral requirements of the specialist's job. Critical behaviors from the specialists were classified into five broad job responsibilities (Level One), 12 duty areas (Level Two) and 69 behavioral tasks (Level Three). The behavioral tasks were rated by both populations as to importance for the position.

There was a general agreement between state specialists and direct supervisors as to importance of critical job elements; however, direct supervisors tended to rate as more important behaviors which are identifiable with university standards for promotion and tenure, and state extension specialists rated as more important behavioral tasks that related to the processes of education.

Specialists in 4-H Youth Development and Home Economics program areas, in soft-applied subject-matter areas, with ranks of instructor or assistant professor,and holding high percent extension appointments tended to rate duty areas higher in importance for the specialist position than specialists in the Agricultural Industry program area, in pure- and hard-applied subject-matter areas, with ranks of associate and full professors, and with a high percent research appointment.

OKLAHOMA

Adekoya, A.A. (1984). Perceptions of Oklahoma cooperative extension personnel regarding their use of electronic technology in disseminating extension education information. Doctoral Dissertation, Oklahoma State University, Stillwater.

The major purpose of this study was to determine the nature and extent of use of electronic communications equipment by Oklahoma cooperative extension personnel for disseminating extension education information. The respondents in this study consisted of 221 cooperative extension personnel in the State of Oklahoma. Two survey questionnaires were designed to obtain the data needed to achieve the purpose of the study. The treatment of the data consisted of frequency distribution, overall means, rank order scales, and percentages.

Analysis indicated that there was a variety of electronic communications equipment available to extension personnel for disseminating extension education information. Among those indicated by the respondents were: microcomputers, printers, video equipment, audioconference equipment, and videoconference equipment. The problem of availability of equipment was perceived as the most serious problem. Extension personnel anticipated using slidetapes and videotapes containing information on livestock judging, wheat production, marketing techniques, greenhouse management, insect identification, and nutrition more than any others in a group of subject areas. All the respondents perceived they needed additional training in using some instructional methods and certain electronic communications equipment. The instructional method and the electronic communications equipment for which respondents perceived the greatest need for training were panel discussion and the videodisk, respectively. Supplementing clientele's other learning experiences was indicated as a major objective which the use of electronic communications equipment helps accomplish. A perceived difference existed between the six groups of respondents on the choices of electronic communications equipment to use for conducting different extension activities.

Barbee, J. R. (1985). Vocational agriculture entry-year teachers' and entry-year assistance committee members' perception of the Oklahoma entry-year assistance program (H.B. 1706). Doctoral Dissertation, Oklahoma State University, Stillwater.

The purpose of the study was to determine the Entry-Year Vocational Agriculture Teachers' and the Entry-Year Committee Members' perception of the Entry-Year Assistance Program. The study sought answers to questions pertaining to assistance

provided, importance, major strengths, major problems, classroom management, and the continuance of the Entry-Year Assistance Program.

The population of the study consisted of all 212 Entry-Year Vocational Agriculture Teachers and Vocational Agriculture Entry-Year Assistance Committee Members who participated in the Entry-Year Assistance Program during the academic years of 1982-83 and 1983-84. Of the total population, 205 (96.69%) responded to the telephone interview.

The perception of the Entry-Year Assistance Program by the Entry-Year Vocational Agriculture Teachers and Entry-Year Assistance Committee Members indicated that the program was "Very important" or "Important." It was further indicated that the reasons for the importance of the Entry-Year Assistance Program were: (1) it provided a opportunity for consultation and discussion, (2) it created a feeling of security, and (3) it provided the assistance needed to improve classroom management. Other conclusions drawn from the analysis of the findings indicated that "Assistance from the Entry-Year Assistance Committee (as a whole)," "Moral support," and "Guidance in making decisions" were major strengths, while "Amount of time required" was the major problem of the Entry-Year Assistance Program. An overwhelming majority of the respondents believed the evaluation/observation instrument provided a fair assessment of the Entry-Year Vocational Agriculture Teachers' abilities. Due to the responses elicited, it was concluded: (1) Entry-Year Vocational Agriculture Teachers were provided an opportunity to adjust and improve as the year progressed and (2) parental input was a valuable consideration for determining certification. However, a need for additional orientation, improvement in staff development, and more teacher consultants providing the required 72 hours of assistance was indicated by the respondents of this study. Based upon notable findings, it was concluded that an overwhelming majority of the respondents favored the continuance of the Entry-Year Assistance Program.

Beard, D. K. (1985). The perceptions of selected Oklahoma State University faculty, vocational agriculture instructors, state vocational agriculture/FFA staff, and selected student participants regarding the quality and importance of the OSU state FFA interscholastic contests. Masters Thesis, Oklahoma State University, Stillwater.

A major purpose of the study was to determine the perceptions of selected OSU College of Agriculture faculty, Vo-Ag instructors, state Vo-Ag/FFA staff and selected student participants regarding the quality and importance of the OSU State FFA Interscholastic Contests. Objectives were formulated to determine effectiveness

of the various Interscholastic areas, perceptions as to the acceptability of awards and levels of recognition, visibility and assistance provided by faculty and overall success and importance of the contests. Data were gathered by mail questionnaires to selected student participants, utilization of the campus mail to selected faculty, and personally administering the survey to state Vo-Ag/FFA staff and the Vo-Ag teachers during their annual Mid-Winter Conference. Frequency distributions, percentages, ranges, and means were the descriptive statistics used.

It was found that over three-fourths of the faculty respondents perceived departmental importance as either "Important" or "very important." The data reflected a need for some type of incentive for faculty involved in the contests. Over 77 percent of the state staff "agreed" or "strongly agreed" the awards presented were of satisfactory quality and scope; approximately 22 percent were "undecided." Over 75 percent of the teachers were "undecided" or "disagreed" concerning their perceived level of involvement; they felt that the faculty was adequately involved. Approximately 80 percent of the selected student respondents attended the 1984 Interscholastics awards presentation. Over 65 percent of the selected student respondents indicated they would be willing to attend an "open house" and tour of departmental facilities if one were sponsored.

College of Agriculture faculty and student participants perceived that the State FFA Interscholastic Contests were an important activity. The awards presented were satisfactory. On-campus awards program served as an important contact vehicle. OSU Student assistance and involvement with the contests was appreciated. Efficient and accurate methods for scoring context results should be used. Communication concerning preparatory materials, advanced information, enrollment materials and student orientation should be emphasized in profesional group meetings, brochures, memos, etc. Departments within the College of Agriculture which sponsor 4-H and FFA Contests should appoint a specific coordinator for agricultural youth activities.

Binam, O. W. (1984). The current and desired participation levels of FFA members in Rogers County. Masters Thesis, Oklahoma State University, Stillwater.

The main purpose of this study was to determine the current and desired participation levels in FFA activities of the FFA members in Rogers County. The schools included were those who offer vocational agriculture: Chelsea, Claremore, Inola, and Oologah. The high school vocational agriculture instructors administered the questionnaire to each student. The completed questionnaires were returned to the researcher for tabulation.

It was found that a total of 183 students were enrolled in vocational agriculture and all were FFA members. The students participated in more activities as they progressed from the ninth to the twelfth grade. The majority of the students believed all the FFA activities should be continued for the coming years. The three activities the students listed as most important were: (1) FFA meetings, (2) fund raising activities, and (3) livestock exhibition. The three activities students listed as least important were: (1) social activities, (2) foundation awards, and (3) speech contests. The students showed a trend to participate in approximately three times as many FFA activities as extra curricular activities.

It was recommended that continued emphasis be placed on 100 percent FFA membership. Also, it was recommended that local teachers encourage participation in FFA and extra curricular activities for the development of the total student and this participation in the programs should help retain a higher percent of junior and senior enrollment.

Bourne, A. R. (1985). Competencies needed for employment of horticulture students at Harrah High School as identified by the Harrah horticulture industry. Masters Report, Oklahoma State University, Stillwater.

The primary purpose of this study was to determine the importance of competencies identified by the Horticulture industry as needed by the students to be employed in the ornamental horticulture industry within the Harrah community. A survey was developed and used to gather data from all of the ornamental horticulture businesses within the Harrah community. The instrument was designed to determine the competencies needed by an employee for an entry level job in the ornamental horticulture industry.

Thirty-eight skill areas were identified and all of these areas were rated as extremely important, highly important, or medium important. None of the skill areas identified rated in the low importance of no importance. There were eight skill areas rated as extreme importance. There were twenty-one skill areas rated as high importance. There were twelve skill areas rated as medium importance. The curriculum will be developed to include the skill areas identified by the horticulture industry. Skill areas rating higher importance will receive more emphasis in instruction.

Drueckhammer, D. C. (1985). Follow-up of College of Agriculture graduates at Oklahoma State University: 1979-1983. Doctoral Dissertation, Oklahoma State University, Stillwater.

The purpose of this study was to gather specific information from former students of the College of Agriculture at Oklahoma State University about their current employment status, the relationship of their B.S. degree and area of employment, the quality and adequacy of training received from their academic preparation while attending Oklahoma State University, and the influence selected factors and people had on the respondents' decisions to earn a degree in agriculture at Oklahoma State University. A thirty-item questionnaire was developed and mailed to a total of 1,525 College of Agriculture B.S. degree graduates of Oklahoma State University for the years 1979 through 1983. A response rate of 62% was received from the population.

The respondents' first and present employment, for most degree majors, was in their fields of college study or closely related to their fields of college study. Quality of instruction, course content, equipment, and facilities used as preparation for first employment was determined to be good by most degree major groups; however, some degree major groups were in other categories for some of the areas evaluated. Most respondents indicated they would seek the same degree at Oklahoma State University if they could remake their decisions regarding study in the College of Agriculture. Most of the respondents were aware of the College of Agriculture Job Placement Office and rated it as doing an adequate job. The job placement facilities were rated as average quality by the respondents. Career guidance and advisement received by students from most degree major respondent groups was rated adequate, with some groups being in the more than adequate category. A summer intern program would have been of much benefit to most degree major areas for making a career choice. More computer courses in degree programs was indicated by a high number of respondents as a needed curriculum change.

George, R. H. (1985). First-year administrative in-service training needs as perceived by county extension directors in Oklahoma. Masters Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to identify priority administrative in-service training needs for first-year Oklahoma County Extension Directors as perceived by individuals who were serving in the role of county director at the time of the study, January, 1985. Questionnaires were mailed to 75 Oklahoma County Extension Directors to gather research data for the study. All 75 agents (100 percent) participated in the study. The questionnaire contained a list of 40 administrative training topics which were subdivided into four major categories: county budget procurement, extension accounting policies and procedures, personnel

management, and office management and communications. For each of the 40 administrative in-service training topics listed, agents were asked their perceptions concerning how important each topic was as related to training for first-year county extension directors. The responses were analyzed using a scale of 1.0 - 1.49, no importance; 1.5 - 2.49, low importance; 2.5 - 3.49, average importance; 3.5 - 4.49, high importance; and 4.5 - 5.0, critical importance. Results were tabulated according to mean and numerical ranking of importance by administrative categories and for the entire 40 training topics.

The study revealed that respondents perceived all 40 of the administrative in-service training topics to be in the high or critical area of need for in-service training for county directors during their first year of tenure. The categories of budget procurement and extension accounting policies and procedures were perceived by agents as containing the topics most important for a first-year administrative training program. There were no apparent differences in importance when comparing responses according to years of experience as county directors and by the size of the staff in which respondents were serving at the time of the study. The conclusions indicated that administrative in-service training should be offered to first-year county directors during their first year of tenure.

Kim, Y. J. (1985). Perceptive assessments of selected dissemination strategies for international agriculture research center findings. Doctoral Dissertation, Oklahoma State University, Stillwater.

A major purpose of the study was to obtain and analyze perceptions of (a) functioning personnel at the 13 International Agricultural Research Centers (IARC's) and (b) International students studying Agriculture at Oklahoma State University as to how centers can best disseminate research results. The investigation sought to determine (1) extent of present usage, (2) effectiveness of present usage, and (3) anticipated effectiveness when fully implemented for each of 15 selected strategies for disseminating information.

IARC staff judged that strategies used most frequently at present were "workshops at the Centers" and "internships at the Centers." Students judged strategies presently used moderately to be "trial plots at provincial level" and "workshops at the Centers." IARC staff believed the most promising strategies for dissemination in the future to be "workshops at the Centers" and "informing research personnel other than IARC's." Strategies which were ranked low by both groups in terms of present usage, as well as future effectiveness, were "primary and secondary schools

informed of IARC's work," "adult villagers in training at IARC's," and "demonstrations provided by PVO's."

It was evident that International students seemed to be rather lacking in knowledge about IARC's. Some of the students did not complete the questionnaire or commented: "I have never heard of IARC's." IARC staff judged the strategy of "informing government officials about the nature, scope and effectiveness of the Center's work" to be "only slightly used." Yet they judged that it would be "readily effective" when fully implemented. It was further evidenced that IARC staff tend to perceive anticipated future effectiveness as being closely related to their own work at the Centers. They tend to believe that strategies involving schools and other agencies are, at present, relatively ineffective. However, they acknowledged that such strategies might well be effective when fully implemented.

Littlefield, C. L. (1985). A needs assessment of microcomputers in vocational agriculture classrooms as perceived by selected Oklahoma vocational agriculture teachers and superintendents. Masters Thesis, Oklahoma State University, Stillwater.

A major purpose of the study was to assess the need and/or use of microcomputers in Vocational Agriculture (Vo Ag) classroom as perceived by selected Oklahoma teachers and superintendents. Objectives were formulated to: characterize the typical Vo Ag teacher as to age, experience, tenure, etc.; determine the perceptions of the Vo Ag teachers with regard to the need and use of microcomputers in the Vo Ag program; determine the emphasis of microcomputer usage relative to the high school educational and Vo Ag programs as perceived by the school superintendent. Two different questionnaires were used to ascertain the data included in this study. Survey instruments were mailed to 156 select Vo Ag teachers and their superintendents. Seventy-three percent of the Vo Ag teachers responded to the study, while 87 percent of their superintendents returned questionnaires. The data were treated with regard to mean scores, frequency distribution and percentages.

A summary of the major findings revealed that most (74.55 percent) of the selected teacher respondents were between 22 and 40 years of age and that over 48 percent of the teachers had less than 10 years teaching experience. It was overwhelmingly demonstrated by over 84 percent of the respondents that a definite need existed to stress the emphasis of microcomputers in the Vo Ag classroom. Based on the findings, it was concluded that the typical Oklahoma Vo Ag teacher respondent was between the ages of 22 and 40 and had 10 years of less teaching experience. The selected teachers overwhelmingly stated a need for microcomputers in the Vo

Ag program. In addition, both Vo Ag teachers and superintendents had similar perceptions regarding the use of microcomputers in educational programs and as a result of microcomputer training, Vo Ag students seem to find expanded opportunities in the job market. Recommendations based on findings were: stress the importance and utilization of microcomputers in Vocational Agriculture by district supervisors and teacher educators; and the development or incorporation of an Agricultural Education course for undergraduates at Oklahoma State University and other teacher trainer institutions in the area of microcomputer usage in the Vo Ag classroom.

Meek, J. R. (1985). Perceived attitudes of selected citizens of the Stigler community toward the vocational agriculture program. Masters Thesis, Oklahoma State University, Stillwater.

Questionnaires were mailed to sixty citizens of the Stigler community. The survey was designed to determine the attitudes of the respondents regarding the vocational agriculture programs, with particular emphasis upon: (1) purpose of the vocational agriculture program; (2) supervised occupational experience programs; (3) classroom instruction; (4) the role of the FFA; (5) the Young Farmers and adult education; and (6) the vocational agriculture teacher's personal life. The respondents included all five school board members, ten teachers and administrators, 15 local farmers and businessmen, 15 parents with FFA members, and 15 parents without FFA members.

The major findings concerning programs for high school students and adults were: (1) the vocational agriculture teacher should teach all areas of agriculture sciences available to the local program; (2) record keeping skills are a vital part of the SOE; (3) field trips and local agricultural industries should be used as a tool for introducing students to agricultural opportunities; (4) all students should be members and become involved in the Future Farmers of America; (5) publicity of activities and functions of the local Future Farmers of America Chapter is an important tool; and (6) young adults and former students should have a Young Farmers Program to help them become established in farming.

The vocational agriculture program should provide the students with a variety of experiences and skills that will provide the basic knowledge to survive in the farming business or occupations related to agriculture industry.

Parli, G. E. (1984). Competency levels of and pre-service training received by vocational agriculture teachers in the central

district of Oklahoma relative to light horses. Masters Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to determine the vocational agriculture teachers' (in the central district of Oklahoma) degree of competency relative to teaching light horse related subject matter. A further purpose of this study was to determine the pre-service experiences the vocational agriculture teachers gained relative to the light horse. A questionnaire was mailed to the 92 vocational agriculture teachers in the central district of Oklahoma of which 69 (75%) completed questionnaires were returned and included in this study. The questionnaire consisted of forced choice responses and a Likert scale to determine the competency levels.

Results of this study were reported according to the objectives of the study. Teachers who responded to the survey can be characterized as having 15 or more hours above the B.S. degree and have taught vocational agriculture four years or more. Furthermore, teachers were not above average concerning their competencies in the following areas: light horse orientation; selection and judging; health and foot care; nutrition; reproduction; facilities and management; and training light horses. Teachers have had little, if any, training in light horse related subject matter and most have not taught light horse subject matter in their vocational agriculture classes or trained horse judging teams. The investigator concluded this may be a result of the lack of pre-service training involving the light horse. Recommendations based on findings were: more emphasis should be placed on teaching light horse related subject matter in the vocational agriculture classroom and agriculture teacher education candidates should receive pre- and in-service education. Also, manpower needs should be assessed as well as educational materials developed in order to meet the demands of the light horse industry.

Pierce, G. E. (1985). Study of importance of duties and tasks for dairy farm operator and dairy farm worker. Master's Report, Oklahoma State University, Stillwater.

The major purpose of this study was to define the importance of the skills and competencies most needed by the dairy farm operator and dairy farm worker. To accomplish this purpose, the following objectives were formulated: (1) determine employment skills needed for the dairy farm operator and dairy farm owners and (2) determine the level of skill necessary for operators and workers in dairy production. A total of sixty-one dairy farm operators completed the survey that was given to them by their local

vocational agriculture instructor in the spring of 1984. The dairy farm operators were asked to respond to the instrument rating the importance of tasks for both dairy farm worker and dairy farm operator.

The survey consisted of 262 tasks of which the dairy farm operator rated the importance of each task for dairy operator and a dairy farm worker. Results showed that a majority of the tasks for the diary farm operator were of high to extreme importance to the occupation. Results also showed that a majority of the tasks for the dairy farm worker were of medium to high importance to the occupation. They study also identified a basic core of duties and tasks for both occupations and a specialized task list for the dairy farm operator.

Presnal, G.C. (1985). Perceptions of benefits of selected educational experiences by developing country agricultural alumni of Oklahoma State University. Doctoral Dissertation, Oklahoma State University, Stillwater.

The major purpose of this study was to assess the appropriateness and effectiveness of selected educational experiences in terms of the preparation for careers in developing countries for international agricultural alumni of Oklahoma State University. A concomitant purpose was to analyze secured data to provide a basis for recommendations directed toward enhancing learning experiences in agriculture provided to international students at Oklahoma State University. Questionnaires were sent overseas to a total of 412 alumni, for which reasonably accurate addresses were available, in June and July of 1984. Valid responses were received from 130 by the end of 1984. The survey instrument included demographic data such as degree and year graduated, economic category, jobs before and after studies at OSU and a five-point Likert-type scale for 13 selected educational experiences. From the data collected, descriptive statistics, including means, were computed to indicated the extent of helpfulness to career preparation of each of the selected learning experiences. Frequencies and mean values were presented for subgroupings of alumni including academic department, degree level, world area of origin/return, and first job after OSU studies and present job.

In general, graduates of the College of Agriculture at Oklahoma State University were quite satisfied with the value of their educational experiences at OSU in preparing them for careers in the developing world. There were discernible differences, however, in the perceived extent of helpfulness to careers between groups for such discriminators as degree level, academic department, world area of origin/return, and between first and present jobs. These differences were particularly notable as the level of

degree increased, between first and present jobs and for Subsaharan Africans among the four world areas studied. The two educational experiences perceived as most helpful to careers were research and classwork in the major subject area. Finally, the need for more educational relevance to situations in the developing world and more practical experiences were mentioned by many of the respondents with, again, the Subsaharan Africans most often commenting on these needs.

Smith, T. G. (1985). An assessment of financial resources, expenditures, and facility features associated with selected agricultural mechanics programs. Doctoral Dissertation, Oklahoma State University, Stillwater.

The primary purpose of this study was to assess the financial resources, expenditures, and facility features associated with agricultural mechanics instruction in selected Oklahoma Vocational Agriculture programs. A secondary purpose was to determine certain variables associated with the time spent teaching in the areas of agricultural mechanics. The Oklahoma District Supervisors of Vocational Agriculture were asked to identify five single teacher and five multiple teacher departments from each district which were considered to have outstanding agricultural mechanics programs. This yielded an initial group of fifty departments which were stratified by districts and single and multiple teacher departments. From these fifty departments, thirty were randomly selected and designated as the sample. An interview instrument was developed an administered by the researcher. The thirty participants were interviewed in their departments during the period from August to October, 1984.

Over 73 percent of the Oklahoma vocational agriculture teachers of outstanding agricultural mechanics programs had more than nine years of teaching experience and in terms of agricultural mechanics instruction at the collegiate level were felt to be adequately trained to teach agricultural mechanics. The majority of the teachers of outstanding agricultural mechanics programs do not view adult/Young Farmer education to be important as was indicated by their not teaching or offering courses in Agricultural Mechanics for adult/Young Farmers. Local school districts provide the major portion of funding for purchasing hand tools, equipment, power tools and for repair costs for the equipment associated with agricultural mechanics programs. It was found that teachers of outstanding agricultural mechanics programs use a wide variety of management methods and/or techniques for minimizing program costs. A very large majority of the teachers spend the greatest amount of time teaching in the Farm Shop Skills area. In addition, it was found that the major reason for lower

emphasis in the areas of Electricity, Farm Power and Machinery, Soil and Water Management, and Farm Structures was because the teachers felt less competent in teaching these areas. The outstanding Oklahoma agricultural mechanics facilities were found to be very diverse with respect to variety, size, and program characteristics.

Stehno, F. D. (1985). A comparison of selected characteristics of vocational agriculture professional improvement groups in the central district of Oklahoma based on high, medium, or low levels of FFA chapter participation in the BOAC program. Masters Thesis, Oklahoma State University, Stillwater.

A major purpose of the study was to determine levels of participation among FFA chapters in the Central District with regard to FFA's Building Our American Communities (BOAC) program. A secondary goal was to compare selected characteristics of the respective programs in terms of experience and teacher tenure among Vo-Ag departments in the Central District. Sixty-five of the 71 (91.5 percent) vocational agriculture departments in the Central District participated in the study. Data were gathered by the means of questionnaires distributed during Professional Improvement Group meetings by District Supervisors. Since random sampling was not involved and the attempt was made to survey all Central District chapters, descriptive statistics such as frequencies and percentages were utilized to treat the data.

It was found that 60 percent of the teachers had 10 years or less experience, while over 75 percent had 10 year tenure or less in their present communities. Eighty-nine percent of the teachers indicated that their chapter has been recognized as Superior Chapter during 1983, while one had received national recognition. A large majority of Central District chapters do not make application for ORRC funding or involve other governmental agencies in local BOAC programs. Respondents across all P.I. groups indicated that class time was utilized to work on the chapter BOAC project. All P.I. groups had at least one chapter that was rated as a high level participant, while the Waurika P.I. group had the fewest chapters ranked in the low category.

Central District teachers for the most part are young teachers and relatively new in their communities. Central District chapters seem to utilize a combination of monetary resources from their community groups and FFA organizations to finance BOAC programs. With regard to the duration of BOAC projects, single year activities seem to be more popular than multiple year projects. Few chapters among the Central District P.I. groups make application for either area of state BOAC awards. By far, the largest group of chapters which publicize their BOAC projects utilize the

printed media. Single teacher departments have a higher level of participation in BOAC activities than multiple teacher programs.

Womack, M. C. (1985). Nature and value of the summer vocational agriculture program as perceived by teachers, parents, and administrators of the northeast district. Masters Thesis, Oklahoma State University, Stillwater.

The purpose of this study was to determine the nature of summer programs of vocational agriculture in Northeast Oklahoma by vocational agriculture teachers, administrators, and parents. Data collected in this study included 36 (45.0 percent) of the vocational agriculture teachers, 49 (61.25 percent) of the high school administrators, and 34 (42.50 percent) of the parents in the Northeast District of Oklahoma. A questionnaire was administered by mail in order to gather data needed for this research effort. Descriptive statistics were used to measure the opinions offered in this research effort.

Vocational agriculture summer programs in the Northeast District of Oklahoma are still a vital part of the total vocational agriculture program. In terms of major priorities, vocational agriculture teachers and administrators indicated working with all-day students was the most important summer activity. However, parents indicated FFA activities were a major priority as a summer activity. Areas of least importance to vocational agriculture teachers and parents as to summer activity was administering records and reports. Working with other agriculture agencies was a lesser priority according to the school administrators.

PENNSYLVANIA

Baggett, C. D., Scanlon, D. C. and Curtis, S. M. (1985). Status of Pennsylvania special needs students in vocational agriculture. AES funded project, The Pennsylvania State University, University Park.

The objective of this study was to follow up employed special needs students and determine their performance on the job. The descriptive method of research, using the survey technique, was used to fulfill the objective. A survey form was used that rated employee job performance in 11 areas: (1) work quality, (2) work quantity, (3) work timeliness, (4) attention to detail, (5) reaction to supervision, (6) job knowledge, (7) attendance, (8) influence on co-workers, (9) safety performance, (10) communication effectiveness, and (11) overall evaluation performance.

The collection of job performance data consisted of two steps. First, a stratified random sample was taken based upon the number of special needs students enrolled in vocational agriculture programs throughout Pennsylvania. The sampling procedure resulted in 75 schools or a 29.5 percent stratified random sample of schools with special needs students enrolled in vocational agriculture. For comparison, all area vocational-technical schools with special needs students, but without vocational agriculture programs (38) were selected. A letter was mailed to the vocational agriculture teachers at the 75 schools and to the director of student services at the 38 area vocational-technical schools. The letter requested the names of five special needs students who had graduated within the last three years and were currently employed or placed. Sixteen schools with vocational agriculture programs (21.3 percent) provided the names of 19 students and their employers. Eight (21 percent) area vocational-technical schools provided names of 29 students and their employers. In total, 24 of the 113 schools (21.24 percent) responded to the request for names of students and employers. A total of 48 students and their employers were identified. As the second and final step toward collection of data, a job performance rating form was mailed to each of the 48 employers identified in step one. A follow-up was conducted to solicit forms from nonrespondents. In total, only 9 employers (18.8 percent) returned the rating form, of which one was incomplete and not usable for analysis.

Analysis of data showed some interesting findings regarding job performance of special needs students. The employers' ratings of the students who enrolled in vocational agriculture while in high school or attended an area vocational-technical school without vocational agriculture yielded a grand mean for the 10 performance items of 5.07. The

employers' overall evaluation of student performance was a mean of 4.50. Generally, special needs students in this study were rated "average" to "above average" on performance of the 10 items. Special needs students rate highest in attendance and lowest in influence on co-workers. However, employers rated the students' influence on co-workers as slightly higher than "average." The employers also rated special needs students "average" in work quantity and job knowledge. The students were rated "above average" by the employers in reaction to supervision, safety performance, communication effectiveness, work quality, and work timeliness.

Berkheiser, H. R. (1985). Effectiveness of the side-cutting pliers method and conventional method for castrating hogs: an instructional experiment. Master of Education paper, The Pennsylvania State University, University Park.

The purpose of this study was to compare the side-cutting pliers method of castrating hogs to the conventional method of castrating hogs. The areas to be evaluated were hog ruptures, rate of weight gain, and incidence of infections. A secondary purpose of the study was to determine if vocational agriculture students involved in the research experiment were more motivated to learn than students who didn't participate in the hog castration experiment.

Fifty-six hogs on three different farms in Lebanon County, Pennsylvania were used in the experiment. Newborn litters were selected and the males identified with an ear notch. The weight of each hog was recorded prior to castration. Randomly, one half of the males in each litter were castrated at four to ten days of age by students using the side-cutting pliers method, and one half were castrated after ten days of age by the farmers using the conventional method. The farmers recorded any signs of ruptures, swellings, or other problems identified with the castration. At eight weeks of age the hogs were reweighed and the weights recorded.

To assess what impact participation in the hog castration experiment had in changing students' attitudes toward the subject matter, intact classes of vocational agriculture students were randomly assigned to one of two treatment levels. One group of students was directly involved in castrating the hogs, and a second group of students was not involved in castrating the hogs. A pretest, Likert-type attitude scale was administered to both groups of students prior to the start of the hog castration experiment.

The results of the experiment indicated there was no significant difference between the side-cut pliers method of

castration and the conventional method. This is true in all of the areas tested in the experiment which included number of ruptures, rate of weight gain, and incidence of infections. Likewise the control group students' views regarding the specific subject matter was not significantly different from the views of students in the experimental group.

Connelly, K. J. (1984). The use of competency based instructional materials by Pennsylvania vocational instructors. Master of Education paper, The Pennsylvania State University, University Park.

The purpose of this study was to examine the use of competency-based instructional materials by Pennsylvania vocational instructors, how these materials were being used, and in which areas of vocational education they were being used. Further, an attempt was made to identify what problems, if any, vocational instructors may be encountering in utilizing competency-based instructional materials.

The design of this study was a descriptive survey. The population for the study consisted of all Pennsylvania secondary and post-secondary vocational instructors listed by the Pennsylvania Department of Education's Bureau of Information Systems for the year 1982. Each individual was numbered consecutively as he/she appeared on the list. Based on Warmbrod's (1965) sample size table TI59, 453 vocational instructors were randomly selected to receive the survey instrument. The selection was made using a TI59 random number generating program.

The majority of these vocational instructors who were using C.B.I.M. in their programs were using them as reference materials. Not knowing what C.B.I.M. are and not knowing how to use C.B.I.M. were the two major reasons given by instructors for not using C.B.I.M. The areas of vocational education most likely to be using C.B.I.M. were career education, trade and industrial, cooperative education, distributive education, and vocational agriculture. Those Pennsylvania vocational instructors who were not using C.B.I.M. in their programs had no training in the use of these materials. Those Pennsylvania vocational instructors who were using C.B.I.M. in their programs had no difficulty obtaining these materials. The major source of C.B.I.M. for Pennsylvania vocational instructors were V-TECS and commercial publishing companies. The greatest expressed dissatisfaction among those instructors who were utilizing C.B.I.M. materials was the lack of time necessary to effectively utilize C.B.I.M. in their programs.

Damrongkiattisak, W. (1985). Communication effectiveness between commune extension agents and rice farmers in Chiang Mai, Thailand. Ph.D. thesis, The Pennsylvania State University, University Park.

This study focused on the communication effectiveness between the Commune Extension Agents (CEAs) and the rice farmers (contact farmers and average farmers) in Chiang Mai Province, Thailand, by investigating selected personal and institutional factors related to levels of communication effectiveness. Communication effectiveness was measured by farmers' responses to practices recommended by the CEAs.

Data were collected from farmers by personal interview using structured interview schedules and from the CEAs by questionnaires. Respondents included the 36 CEAs in the District of San-sai, San-kamphaeng, and Mae-taeng and 144 rice farmers from those districts, identified through a multi-stage random sampling process. The Spearman-Brown split-half method for establishing reliability resulted in coefficients of reliability for the various sub-scales ranging from .74 - .91. Instrument face validity was established through pretesting with CEAs and rice farmers not in the study.

Major results of the study were: (1) the net communication effectiveness mean between the CEAs and the contact farmers was 58.5 percent; (2) the net communication effectiveness mean between the CEAs and the average farmers was 39.3 percent; (3) CEAs' biographic factors showed no significant relationship to communication effectiveness; (4) CEAs' job satisfaction was positively ($r = .58$; $p < .001$) associated with communication effectiveness; (5) farmers' motivation for and involvement in seeking information was significantly related to communication effectiveness; and (6) the CEAs' expectations fulfillment as perceived by farmers was positively and significantly related to communication effectiveness. A developmental model for predicting communication effectiveness between the CEA and the contact farmer was developed. The factors in the model which accounted for 70 percent of the variance between the CEA and the contact farmer included number of farmer's personal contacts with the CEA, CEA's job satisfaction. The factors in the model which accounted for approximately 83 percent of the variation in communication effectiveness between the CEA and average farmer included the CEA's expectation fulfillment as perceived by farmer, farmer's income sufficiency, number of farmer's extension office visits, number of personal contacts with the CEA, and and CEA's job satisfaction. The results of the study substantiated the principal hypothesis of the study that communication

effectiveness is affected by the roles played by the communicator, receiver, and perceptual interpersonal relation variables.

Easter, G. W. (1985). Assessment of professional competencies needed by extension agents in developing countries: case study in Zwaziland. Ph.D. thesis, The Pennsylvania State University, University Park.

The primary purpose of this study was to identify and assess the professional competencies needed by the Swaziland Ministry of Agriculture and Cooperatives extension workers (agents). The secondary purpose was to determine whether extension personnel perceived the competencies should be learned during preservice or inservice education.

National and district staff, local supervisors, and local agents were sampled. The inability of obtaining a random sample required the researcher to attempt to survey the entire population. Thirty national/district staff, 23 local supervisors, and 125 local agents (combined 47% of the total population) completed questionnaires. A questionnaire was used to collect information concerning the demographic characteristics and the perceived value of 150 professional extension competencies in the extension personnel's current positions. The competencies were classified within nine categories: administration, program planning, program execution, teaching, communication, understanding human behavior, maintaining professionalism, evaluation, and youth.

The data were analyzed using descriptive statistics. The findings showed no substantial differences in the perceptions of the professional extension competency categories when examined by individuals' position, area of responsibility, experience, age, sex, educational level attained, and level of development inputs. Program planning, program execution, teaching, and evaluation competencies were consistently perceived as being of "strong" or "moderate" value to the extension staff. Communication and maintaining professionalism competencies were viewed as having "low" value in the respondents' current positions. Administration competencies were rated higher, although not substantially higher, by administrative and supervisory staff. Because of its infancy as a program and by the nature of its delivery to the field, 4-S was consistently perceived as having a "low" value among all staff.

The extension staff indicated that inservice training was the most appropriate time for developing a majority of the competencies. It was not concluded that preservice should be

eliminated, but that more emphasis should be placed on inservice training.

Fecik, S. F. (1985). Small animal care competencies needed for entry level employment. Master of Education paper, The Pennsylvania State University, University Park.

This study had three objectives. The primary objective was to identify the employment opportunities for personnel in the small animal care industry of Southeastern Pennsylvania. Secondly, the study sought to identify the competencies by major job title needed by personnel in the small animal care industry. Third, based upon the information obtained, recommendations were developed regarding major units of the study to be included in a course of study for small animal care.

A survey instrument that closely paralleled the questionnaire developed by Stinson (1978) was utilized. Respondents from the population were asked to provide basic information about the involvement and scope of their small animal care business. Respondents also were asked to identify specific job titles in their specific area of small animal care, and then to list all skills required for each job title. The target population for the study consisted of all veterinarians, managers/owners of pet sales facilities,and supervisors at research institutions (i.e., medical colleges and pharmaceutical private industry) appearing in the 1983 "Philadelphia and Area Yellow Pages" and the 1983 membership list of the Delaware Valley branch of the American Association for Laboratory Animal Science. A census of the target population was conducted. Surveys were sent to 97 veterinarians with 72 (74%) responding after two contacts. Thirty-six pet shop owners were surveyed with 9 (25%) responding. Surveys were mailed to 25 pharmaceutical research facilities with 9 responses. The response rate for the study was 90 out of a possible 158 (57%).

Research establishments had the largest number of full-time employees, therefore offering interested students greater opportunities for career-oriented positions. Part-time employment was relatively the same for the three types of small animal care establishments. The seasonal employment was dominated by the pet shops, and reflects the market's demand. The data indicated that the type of small animal care establishment directly reflected the major responsibility areas in which personnel were employed. Personnel in veterinary establishments conducted the majority of their work in the medical area; personnel in research establishments worked primarily in the area of research; and pet shop personnel worked primarily in the sales area. Personnel for all three of the

establishments also were involved, to some extent, in the areas of maintenance and purchasing. It was noted that small animal care establishments with a diverse number of employees and/or titles require employees to be more specialized in specific competencies; whereas, establishments with a small number of employees and/or job titles require employees to have a more generalized level of competence. However, a sound background in small animal care was suggested for all identified job titles, with the exception of receptionist in a veterinary establishment and a manager/supervisor in a research establishment.

Lougee, J. E. (1984). The development and evaluation of a maintenance system for shop equipment in vocational agriculture departments. Master of Education paper, The Pennsylvania State University, University Park.

The purpose of this study was to develop a maintenance system for vocational agriculture shop equipment and machinery. A secondary purpose was to develop maintenance lists for equipment and machinery found in vocational agriculture shops and to assure that the reading level of the material was adequate for high school students to comprehend.

Five vocational agriculture teachers from Clearfield, Indiana, and Jefferson counties were selected to evaluate all components of the maintenance system. Vocational agriculture programs with high emphasis in agriculture mechanics were selected to evaluate the material. The maintenance system was provided to each of the five vocational agriculture teachers along with an evaluation sheet. Each teacher was asked to carefully study the material before making an evaluation of all components of the maintenance system. The system was not evaluated by actual implementation into their vocational agriculture programs, but by rating all components of the maintenance system separately.

The evaluation of the maintenance system by the five vocational agriculture teachers indicated that the overall plan for the maintenance system was functional. The procedure and overall plan received the highest ratings, while the filing card part of the system received the lowest ratings by the evaluating committee. In discussion, some teachers felt that the card index and maintenance check list were a duplication and that the maintenance check list would actually serve the purpose. The reading evaluation by the reading specialist showed that the Raygor Readability Estimate gave an invalid rating to the material in the maintenance check list. The sentence structure was too short to evaluate on the graph. Sentences were kept short to conserve space. Reading of the maintenance lists by

vocational students in her reading group, however, showed that students could read and understand the material. When words were taken out of text some of them were difficult to understand. A list of these with their meanings was developed for teacher use.

Ngulube, J. J. (1985). Procedures for changing farmers' attitudes towards soil conservation in communal farming areas in Zimbabwe: a historical case study. Master of Agriculture paper, The Pennsylvania State University, University Park.

The purpose of this study was to examine the existing top-down extension model (in view of its limited success) to determine if it can be modified or replaced with an alternative model better suited for use in the Communal Farming Areas (CFAs) of Zimbabwe.

The study was a historic case study, and therefore did not have an experimental design. The existing top-down extension model was critiqued on the basis of literature and a modified Delphi technique involving nine Zimbabwean Extension Agents currently studying in the U.S.A. Traditional farming and knowledge systems and the traditional communication model were also examined.

Based on the findings, a proposed extension model was developed and critiqued by a panel of experts. The panel of experts consisted of four American professionals with some international experience and/or extensive knowledge of agricultural extension. There was congruence between findings from literature and the Delphi study. The concept of conservation was not found to be new to CFA farmers. They possess a lot of knowledge about their environment and have their own communication patterns.

The top-down model's major drawback was found to be its lack of feedback from farmers to assist decision making at the top. There is also a problem of heterophilly between extension agents and the farmers. The model was found to be at variance with the current development paradigm of self-development. The top-down model promotes dependency on the part of farmers by making decisions for them. Ideas for extension programs originate outside the CFAs and are based mostly on non-site specific blanket recommendations. The problem solving, learning/teaching model was proposed as a modification to the top-down extension model. This model was based on two-way communication (dialogue) between the farmer and extension agent in finding solutions to mutually pre-identified problems. The model sought to minimize the weaknesses of the top-down extension model while building on its strengths.

Ongondo, W. N. (1984). The professional competencies needed by intermediate agricultural extension personnel in the Kenya agricultural extension service. Ph.D. thesis, The Pennsylvania State University, University Park.

The study's major purpose was to describe and compare the perceptions of Technical Officers, District Agricultural Officers, and Trainers regarding the professional competencies needed by intermediate agricultural extension personnel in the Kenya Agricultural Extension Service. A secondary purpose was to examine the relationships between selected demographic characteristics and the perceptions of the respondents regarding the importance of the professional competencies.

The sample consisted of Technical Officers, District Agricultural Officers, and Trainers in Kenya. A questionnaire was developed to collect data concerning the respondents' demographic characteristics and their perceptions of the professional competencies in the areas of administration, program planning, program execution, teaching, communication, understanding human behavior, maintaining professionalism, evaluation, and 4-K Youth. The questionnaire was mailed to a random sample of 200 Technical Officers, 30 District Agricultural Officers, and 120 Trainers after it had been validated and pilot-tested.

The three groups of respondents indicated that 108 of the 111 professional competencies were of high importance in the operation of a successful agricultural extension program. The analysis of variance revealed that the three groups of respondents rated the importance of the 17 professional competencies significantly different.

It was found that the area of responsibility of the respondents made a significant difference in the ratings in the program execution and the teaching competency categories. Also, the community where reared made a significant difference in rating the importance of the professional competencies in the maintaining professionalism competency category. Lastly, the respondents who had more years as members of 4-K Youth clubs rated the professional competencies in 4-K Youth competency category higher in importance than those who had less years in 4-K Youth clubs.

Robbins, E. D. (1985). The development of a Pennsylvania 4-H wildlife conservation leader's guide using task sheets. Master of Education paper, The Pennsylvania State University, University Park.

The purpose of the study was to examine and revise The Pennsylvania 4-H Wildlife Conservation Leader's Guide. The revised guide was designed to include sources of instructional resource materials and a number of 4-H wildlife club activities using task sheets.

A sample of 4-H Extension Agents and 4-H wildlife project leaders was identified and asked to submit activities and materials that they would recommend to be included in the guide. Those responding indicated that a major revision of the Leader's Guide was needed. Their major concern was the lack of suggested wildlife conservation activities and instructional materials.

After contacting several wildlife conservation agencies and organizations and compiling lists of the resource materials available, the author revised the guide. Several wildlife task sheets were added to the guide that may be used for 4-H wildlife club activities. These include: "Developing a Natural Spring Seep", "Pruning and Fertilizing Old Apple Trees for Wildlife Food", "Planning for Backyard Wildlife", "Building a Bluebird Nest Box", "Planting Trees and Shrubs for Wildlife", and "Building an Automobile Tire Den for Squirrels."

The revision of the guide was then evaluated by a panel of experts consisting of 4-H wildlife project leaders, 4-H Extension Agents, 4-H and Wildlife Faculty at The Pennsylvania State University and personnel at the Pennsylvania Game Commission. Their comments were collected and synthesized and then incorporated into the revised edition of The Pennsylvania 4-H Wildlife Conservation Leader's Guide.

Suso, S. B. (1984). Impact of 4-H activities in leadership, personal, technical skill, social and value development. Master of Education paper, The Pennsylvania State University, University Park.

The purpose of this study was to describe the impact of participation in 4-H teen development activities on members of local 4-H clubs. The specific objectives of the study were to describe selected demographic characteristics and to determine the knowledge, skills, and/or attitudes of all of those sampled from five counties in Pennsylvania.

The study was a descriptive survey. Data were collected from 125 4-H teen members from each of five Pennsylvania counties. A five-part questiornaire was developed and each 4-H teen member in the sample was sent one. Overall, 51 percent of the questionnaires were returned and approximately 50 percent were usable.

Age, leadership role, and number of years enrolled were found to provide significant different scores on values development; thus,there was reason for the rejection of the null hypothesis. The older the members, the greater their leadership role experiences. The longer they had been in 4-H, the higher their value scores. Differences between scores by sex were not found to be significant and hence the mean scores for males was no different from that of the females.

Differences in personal development among age, sex, and number of years enrolled were not found to be significant and, therefore, the null hypothesis was accepted. There was reason to believe that personal development was not influenced by age, sex, or number of years in 4-H. Differences in leadership role were found significant. As leadership role increases, members' scores on personal development increases. Analysis of technical development scores indicated that age, sex, and number of years enrolled have no influence on the technical development scores. However, leadership role was significant. As members' leadership role increased, their technical development scores increased as well. Differences among social development scores were not significant for the variables tested. Analysis of leadership development scores indicated no significant differences between leadership development scores according to age, sex, and number of years enrolled. Differences in scores as a result of leadership role, however, were significant. The mean scores for those who had leadership roles were higher than for those who did not.

Waters, R. G. (1985). An evaluation of the beginning teacher supervision program conducted by the Department of Agricultural and Extension Education at The Pennsylvania State University. Ph.D. thesis and externally funded project, The Pennsylvania State University, University Park.

The study evaluated the effectiveness of a beginning teacher supervision program conducted by the Department of Agricultural and Extension Education at The Pennsylvania State University. Specifically, it analyzed differences between a group of 23 vocational agriculture teachers who participated in the beginning teacher program and a similar group of 35 vocational agriculture teachers who did not participate in the program.

The program evaluated was an individual teacher supervision program which used the Developmental Supervision Model proposed by Glickman (1981) to work with beginning teachers of vocational agriculture in Pennsylvania. It involved

University-based supervisors working in teachers' classrooms in an attempt to improve teaching clarity and job satisfaction.

The study used a quasi-experimental, Nonequivalent Control Group design. Criteria for evaluation were adjusted post-treatment scores on the Brayfield Rothe Index of Job Satisfaction and adjusted post-treatment scores on a Teaching Clarity Index developed by the researcher. The main effect of treatment level and its possible interactive effects with participation in school induction programs and years of teaching experience were factors which were analyzed in the study.

Results of the multivariate analysis of variance produced no evidence to conclude that scores on either index differed significantly between treatment group and comparison group. There was also no evidence to suggest that years of teaching experience or participation in school induction programs had any interactive effect with treatment level upon job satisfaction or teaching clarity.

Williams, W. and Lewis, J. P. (1984). Soliciting industry's opinions for improving vocational education. Externally funded project, The Pennsylvania State University, University Park.

The purpose of this study was to obtain information on employers' views toward vocational education. A random sample of 111 employers from the Pittsburgh, Reading, Northeast and Allentown-Bethlehem-Easton SMSA's were invited to attend two-and-one-half-hour meetings to discuss their suggestions for improving three fundamental issues in vocational education. Employers were asked to answer the following questions: (1) What can vocational education do to improve the basic skills of students? (2) What can vocational education do to improve the technical job skills of students? (3) What can vocational education do to improve the job attitudes of students?

A modified Nominal Group Technique was used to determine the opinions of the small groups about the means of improving vocational education. Later a modified Delphi Technique was used to rerank the priority recommendations for the established recommendations from all sites.

The findings of the study indicated a high level of agreement among employers on how best to improve vocational education. Priority recommendations were ranked, however, all recommendations were concluded to be significantly important in the pursuit of quality vocational education programming in Pennsylvania.

Answers to the basic skills question repeatedly demonstrated the need for earlier proficiency before entering a

vocational course, and vocational educators should be more concerned with the reinforcement of basic skills. It was also indicated that proficiency should occur earlier in the educational process and guidance counselors need more emphasis on vocational awareness.

The technical job skills questions illicited much concern about the need for technological updating of vocational teachers and curriculum upgrading. Also, the employers expressed the necessity for broad based vocational programs at the secondary level while specialization should be fostered at the postsecondary level. In addition, vocational teachers should better understand methods for teaching vocational education.

The job attitudes question responses emphasized the need for students to understand the free enterprise system. The American way of doing business was felt to be an important ingredient of vocational programs. Again, the idea of emphasizing technological updating for teachers was emphasized as well as having the curriculum more accurately simulate work site experiences.

Three recommendations were constructed on the basis of employer opinions: (1) Vocational educators should review existing programs that have been successful and impact the identified suggestions for improving vocational education. (2) Vocational educators should assess the roles of all groups that could impact on vocational programs particularly: labor, commerce and state departments of education, teacher education, postsecondary educators, secondary educators, industry, and other significant groups that are interested in vocational education. (3) Finally, more deliberate collaboration must be developed between educators and business and industry representatives.

The employers who participated in the meetings resoundingly expressed interest and concern in the ways and means of improving vocational education. These meetings reflected industrys' willingness to collaborate and share in the partnership for the development and improvement of vocational programming. Industry exists as a viable resource to enhance the delivery of vocational education in Pennsylvania. Their willingness and concern should be harnessed,developed, and promoted for the common good of both industry and education.

TENNESSEE

Lamberth, Edwin E. and Griffin, Sumner A. A follow-up survey of graduates of the School of Agriculture at Tennessee Technological University. Staff Study, Tennessee Technological University, Cookeville.

The purpose of this study was to follow-up graduates of the School of Agriculture at Tennessee Technological University for the years 1981-82, 1976-77, 1971-72, 1966-67, 1961-62, 1956-57, and 1951-52.

A follow-up questionnaire was developed by the faculty of the School of Agriculture. Mailing labels for graduates were obtained from the Tennessee Tech Alumni Office. For the years selected to study, there were 282 graduates of the School of Agriculture. A questionnaire, a letter of instruction, and a self-addressed stamped envelop were mailed to each graduate. Approximately eight weeks after mailing the questionnaires, a follow-up letter was sent to each graduate who had not returned the questionnaire. One hundred and six, or 37.6 percent, of graduates returned usable questionnaires.

The findings were: (1) The agricultural graduates were satisfied with the training they received. Twenty-three percent rated their training more than adequate, and 71 percent rated it adequate. (2) The graduates believed the agricultural program was a sound professional program, adequate for today's professions. Strong points of the program were quality instructors and their personal interest in students. (3) The graduates felt the program should include more lab and practical agriculture experiences. (4) Over half of the graduates were employed in agricultural occupations related to their majors at Tennessee Tech. Sixty percent were employed in related occupations. (5) Most of the graduates stayed in Tennessee to work. Fifty-five percent were employed in Tennessee. (6) The graduates had stable employment records. Approximately 27 percent had worked for the same employers since graduating from Tennessee Tech. (7) The graduates were employed in a variety of agricultural occupations. They held 29 job titles with 48 different employers. (8) Management, education, research, and development were the most common job tasks performed by the graduates. (9) The average salary of the respondents was $29,113.00. (10) Many of the graduates had continued their education. Forty-four percent had earned an advanced degree and 13 percent were working toward an advanced degree. (11) Most of the graduates who continued their education did so in Tennessee. Forty-nine percent held advanced degrees from Tennessee institutions.

Todd, John D. (1985). Teacher Education in Agricultural Education in the United States. Staff Study, University of Tennessee, Knoxville.

The purpose of the study was to determine the characteristics of teacher education programs in agricultural education and the academic preparation and entrance requirements for being admitted into the programs and receiving certification to teach vocational agriculture.

A questionnaire was developed to obtain the necessary information. The study included 59 institutions representing all states except Maine and Hawaii. Fifty-two, or 88%, of the instruments were completed and returned. Responses were received from 46 of the 48 states represented in the study. Ten of the responding institutions were from the Eastern region, 15 from the West, 15 from the South, and 12 from the Central region.

The major findings were: (1) The majority of the agricultural education programs (65%) were administered by colleges of agriculture. Twenty-five % were administered by colleges of education and 10% were administered jointly; (2) The majority of the programs (71%) were scheduled on the semester system; (3) The composite means of required hours equated on the quarter system for different areas were: 71.7 in technical agriculture, 19.7 in professional education, 27.0 in agricultural education, and 193.7 for a B.S. degree; (4) A composite mean of 61.5 clock-hours was spent in a field experience, excluding student teaching; (5) The composite mean for student teaching was 10.4 weeks, with a range from seven to 18 weeks; (6) Only 34 percent of the programs required "across-the-board" vocational courses for certification; (7) A composite mean of 8.8 students was required for offering an undergraduate course with a range from one to 18; (8) Based on a 4.0 scale, the composite mean was a 2.49 G.P.A. for admission to student teaching and 2.32 for admission to teacher education; (9) Other selected requirements for either being considered for admission to the universities or teacher education were: Thirty-three % of the programs reported requiring a field experience in agriculture and one university required a foreign language, but this was being considered by nine others.

TEXAS

Carnes, J.E. (1985). Job variables related to internal motivation as perceived by persons employed in selected professional occupations in agriculture. Doctoral dissertation, Texas A&M University, College Station.

The purpose of this study was to determine which job characteristics have potential for enhancing internal motivation among individuals in selected professional occupations in agriculture.

The population included all teachers of vocational agriculture (VATS) and all county extension agents specializing in agriculture (CEAs) in Texas. A random sample of 300 was selected. The Job Diagnostic Survey (JDS), the instrument for the study, was pilot tested and mailed to the sample of subjects. Of 300 possible, 265 (88%) returned the instrument.

The VATs and CEAs exhibited approximately equal degrees of occupational mobility, distributions of age and levels of education. While the VATs spent most of their time working with youth, the CEAs worked slightly more with adults than with youth.

Concerning both professions, statistically significant, positive relationships were found between the core job characteristics and the critical psychological states and between the critical psychological states and internal motivation.

VATs perceived their jobs as being significantly higher in task identity and knowledge of results than CEAs. CEAs perceived their jobs as being significantly higher than VATs in skill variety, feedback from agents, dealing with others, satisfaction with compensation, and satisfaction with job security.

When compared to the JDS norms for professional/technical workers, both VATs and CEAs believed that their jobs provided significantly more opportunities for feelings of motivation. Both groups reported less need for personal growth from their work than did the JDS norm group.

Larke, A. & Townsend, C.D. (1985). The Relationship Between Leadership Development and Career Placement/Advancement of Texas A&M College of Agriculture Graduates. Staff study, Texas A&M University, College Station.

The purposes of this study were: (1) to determine the types of leadership activities in which Texas A&M College of Agriculture graduates have participated during high school, college, and as private citizens; (2) to compare the types of leadership activities with the types of employment entered upon graduation from the Texas A&M College of Agriculture; and (3) in a follow up study of

Texas A&M College of Agriculture 1979 graduates, to compare their pre-graduation and post-graduation leadership activities with their positions in agricultural employment.

A mail questionnaire, a follow-up postcard, and a repeat mailing were used to collect data from a randomly selected group of 1979 and 1984 College of Agriculture graduates. The responses were analyzed using percentages and mean scores.

Major findings included the following: (1) Student Government Associations, National Honor Societies, Future Farmers of America and 4-H were the leadership activities participated in most during high school; (2) the majority of the 1979 and 1984 graduates listed the Hometown Club, Saddle and Sirloin, Alpha Zeta (Honorary Agriculture Fraternity), and the Agricultural Economics Club as leadership activities participated in during their tenure in college; and (3) the church and career-related organizations were listed as the societies in which graduates were currently participating on a professional basis.

Paulson, C.E. (1985). Present and future use of computers in high school programs of vocational agriculture in the United States as perceived by teachers of Vocational Agriculture. Doctoral dissertation, Texas A&M University, College Station.

This study was to determine how teachers of vocational agriculture in high schools in the United States utilized computers and how they perceived computers should be used in the future. Data from mailed questionnaires were obtained from 238 teachers during the fall, 1984, making a usable response rate of 55.2 percent from a national random sample of 431 teachers.

The following findings emerged: (1) How teachers perceive the value of computers for educational uses is not highly correlated with the time computers are presently being used, the percent of students using computers, reasons why computers are not being used, the length of time computers are presently being used, or the manner in which computers were introduced; (2) The value given for ten uses of computers (i.e., Computer-Assisted Instruction, Dialogue, Drill and Practice, Games, Interactive-Computer Videodisc, Simulation, and Problem Solving) was calculated to be from "average" to "much." Computer-Managed Instruction was most valuable and Games were least valuable; (3) Computer-Assisted Instruction, Computer-Managed Instruction, and Problem Solving were the three ways most listed of using computers; (4) Teachers suggested management and record keeping as the most important topics to teach with computers; (5) A moderate association between Computer Usage and Amount of Computer Training existed; (6) One half of the teachers surveyed used computers; (7) Apple and Radio Shack were the most common brands, but IBM is gaining in popularity; (8) Lack of money, training, software, and

administrative support limited computer usage; (9) The majority of teachers using computers were instrumental in initiating their use in programs; (10) Computers will have a significant place in programs of vocational agriculture in the future; and (11) Only 3.4 percent planned not to purchase microcomputers within the next five years.

UTAH

Abang, A. N. (1985) Grain corn and grain sorghum: a yield comparison in Cache County area of Utah. Master of Science Report, Utah State University, Logan.

A field demonstration trial involving five varieties of grain corn and grain sorghum were conducted to compare the yield of grain corn with grain sorghum in the North Experiment Farm in Cache County, Utah. The average yield of grain corn was 95.46 bu/acre while the mean yield for grain sorghum was 67.55 bu/acre. The grain sorghum had an additional yield 4 to 5 tons per acre of stalks that could have been harvested (after the heads were harvested) and fed to livestock. The average protein content in sorghum was 7.4% and 6.22% for corn. This trial resulted in corn yielding an average of 27.91 bushels per acre higher than grain sorghum but sorghum produced 1.2% protein and 10.33% acid detergent fiber higher than corn.

The results of these findings should facilitate the selection of high yielding varieties adaptable to Cache Valley conditions, demonstrate the cultural practices involved, and help farmers determine which of these two crops to include in their cropping program.

Bakri, M. S. (1985) Guidelines for land distribution in Saudi Arabia. Master of Science Report, Utah State University, Logan.

This paper reviews the Barren Land Distribution Law of 1968 and discusses how the government of Saudi Arabia initiated this law. Three major objectives are involved in this study. First, identifying the general characteristics of the Saudi Arabia Land Distribution Law of 1968; to examine the reasons for the creation of this law and to analyze its advantages and disadvantages. Second, to identify systems of land distribution and techniques in other less-developed countries that result in increased food production. And, third, to describe how to apply the findings of this study to the land area and conditions in Saudi Arabia.

Banks, S. J. (1984) A Comparison of Utah farmers' perceived manpower and training needs in 1980 and 1984. Master of Science Thesis, Utah State University, Logan.

The Agricultural Education Department at Utah State University is in the process of developing a new statewide high school curriculum for vocational agriculture. A previous study was conducted in 1980 to determine what skills are necessary in production agriculture, but due to new innovations and changing techniques in the agricultural industry a more current study was needed.

Therefore, this study was conceived to provide current information for the development of the high school vocational agriculture curriculum. This study replicates a previous study and therefore tests the rapidity with which agricultural production technology changes in Utah.

The purpose of this study was to determine and compare job competencies, employment demands and perceived training needs important to production agriculture in Utah between 1980 and 1984.

Some of the major findings included the following:

1. Of the respondents hiring full or part-time help only 19 (22.6%) offer any type of profit sharing program to their employees.

2. Of the 87 total skills surveyed only 25 (28.7%) showed a significant difference at the .05 level of significance from 1980 to 1984; of these, 17 (68%) increased in perceived importance while 8 (32%) decreased in importance.

3. Of the 87 skills used in this study 42 (48%) were rated between the important to very important level, while 45 (52%) were rated between the levels of some importance to important.

4. The five rated most important competencies among all major categories surveyed were servicing air cleaners, inspecting equipment for operating defects, maintaining cooling systems, maintaining lubrication, fuel and ignition system, and constructing and repairing fences, gates, doors, and pens.

5. The five least important individual competencies for all major categories were using artificial insemination, selecting appropriate marketing systems, placing fire extinguishers in buildings and on equipment, taking soil samples and utilizing information in determining fertilizer requirements, and interpreting and utilizing feed analysis reports.

Calderon, J. (1984) A university curriculum for the academic development of adult educators working to improve Bolivian agriculture. Master of Science Report, Utah State University, Logan.

The purpose of this study was to develop an educational model for people in governmental agencies and the private sector. This curriculum model was needed to provide training for support services personnel in resource management and food production. The specific objective of this study was to develop a university curriculum which will prepare graduates to guide and direct planned change in the Bolivian agrarian sector for solving problems of poverty, malnutrition, and low levels of food production. This paper is a library study using existing documents and publications. It suggests that social change developed through an educational model can be spread to all socio-economic levels in the rural sector, and the university system is a logical place to start the change process by implementation of a new curriculum in Rural Development. It is recommended that a strong relationship should be created between the University System and the Extension Service. Continuous feedback would be necessary to help assure that the curriculum has the proper focus and that modifications are made as needed. In-service training workshops would provide an excellent opportunity for Extension personnel and university educators to exchange ideas, while at the same time serving as a refresher course for the extension workers. The performance of all Extension personnel should be evaluated annually and recommendations for improving their performance should be made.

Iliyasu, Y. (1984) The impact of demonstration methods to measure cage layer waste as a fertilizer source. Master of Science Report, Utah State University, Logan.

The purpose of this report was to identify a basis for using cage layer waste (CLW) in crop production, and to gain a practical experience in field demonstration work for future application in Nigeria. A secondary purpose was to report the results of the replicated demonstration plots to interested agriculturalists in Utah.

The objectives were:

1) To establish optimum application rates for cage layer waste that would be both economical and efficient for maximizing crop yield.

2) To identify the effects of high and low rates of cage layer waste application on selected common crops grown in Utah.

3) To identify the effects of the various application rates throughout the crop growing stages.

4) To identify soil residual effects of heavy cage layer waste application.

The influence of cage layer waste and nitrogen fertililzer were observed on corn, potato , tomato, and onions. The statistical analysis, as well as observations, revealed that there was no significant differences in yield between the treatments in corn, potato, and tomato. Considering the low cost of cage layer waste, the 4 tons per acre rate of cage layer waste will provide a higher net return in corn, potato, and tomato. The analysis for onion shows that there are significant differences between the treatment, and that onion did not show any positive response to the cage layer waste treatments. The effect of 8 tons of cage layer waste showed a burning effect and also resulted in lower yield in potatoes, onions, and tomatoes. The plots subjected to 8 tons showed a high residue of nitrogen sufficient for growing crops on the land the following year. This study suggests that the rate of cage layer waste should not exceed 6 tons of fresh waste per acre (dry weight) for corn and potatoes, and a maximum of 3 tons for tomatoes, onions, and other vegetable crops.

Ousseini, K. (1985) Controlling iron chlorisis in raspberry plants utilizing selected commercial product. Master of Science Report, Utah State University, Logan.

This study sought to identify the appropriate commercial products and the cost of their application in correcting iron chlorosis in raspberry plants, information and recommendations transferable to raspberry producers, and practical experience which also would be of use in field demonstration work in the writer's home country, Niger, West Africa.

The study was conducted from June 12 to August 11, 1984, in a farmer's chlorotic raspberry field.

Commercial products tested were Duval's iron-sul, Cytozyme's Iron+, Lefingwell's ZIPP, ferrous sulfate, and Ciba Giegy's Sequestrene "330". Iron-sul was incorporated into the soil once. Iron+, ferrous sulfate and Sequestrene were applied once on the plant leaves, whereas ZIPP, because of its low content of Fe, was sprayed on the leaves once every two weeks.

In general, there was little improvement in plant appearance as a result of the iron treatment. None of the products completely eliminated the chlorotic condition. Analysis of variance showed there were no statistically significant differences among blocks or treatments, though the following products seemed to be more effective based on the mean scores of the treatments. Ferrous sulfate (35 kilograms per acre) seemed the most effective treatment, Sequestrene "330" (32 kilograms per acre) the second, and iron-sul (1,598 kilograms per acre) the third.

Economic feasibililty analysis, based on the prices of these most promising products and on the cost of their application, showed the same relative rankings. Ferrous sulfate was the least expensive ($323.97 per acre) followed by Sequestrene "330" and iron-sul.

Seyedbagheri, M. M. (1985) Effect of selected herbicides on wild oat and broadleaved weeds in spring barley. Master of Science Report, Utah State University, Logan.

Sixteen herbicide treatments were evaluated for control of wild oat (Avena fatua), lambsquarters (Chenopodium album), and hairy nightshade (Solanum sarachoides) in irrigated spring barley in northern Utah. The chemicals and rates (in kg a.i./ha) for each treatment were as follows: (1) chlorsulfuron .25; (2) chlorsulfuron .50; (3) 2,4-D-amine .50; (4) 2,4-D-ester .50; (5) dicamba .38; (9) barban .25 + metribuzin .25; (10) barban .25 + metribuzin .38; (11) difenzoquat 1.00; (12) bromoxynil .38; (13) difenzoquat .75 + bromoxynil .38; (14) bromoxynil .38 + MCPA .38; (15) diclofop 1.00; (16) diclofop .75 + bromoxynil .38.

The most effective treatments against wild oat were difenzoquat and diclofop, with or without bromoxynil, and barban, metribuzin, or a combination tereof. Lambsquarters was effectively controlled by all treatments except diclofop, difenzoquat, and barban. Treatments containing dicamba, bromoxynil, 2,4-D, or high rates of chlorsulfuron or metribuzin were most effective in control of hairy nightshade. The best treatments for broad-spectrum weed control were difenzoquat + bromoxynil, diclofop + bromoxynil, and metribuzin.

Spielmaker, D. M. (1985) A comparison of employee demand and job-entry requirements for Utah's farm implement industry in 1981 and 1985. Master of Science Thesis, Utah State University, Logan.

Vocational Agriculture Educators are constantly faced with the question, "what should I teach?" This study was conducted to

determine manpower and competency needs perceived by the Utah farm implement dealers, to hopefully assist vocational agriculture educators in curriculum planning.

This research is a replication study and therefore demonstrates changes that have taken place in Utah's farm implement industry between the years of 1981 and 1985. Comparisons of data collected for these two years were made and tested for significant differences by an analysis of the variance.

The population consisted of all Utah farm implement dealers. All dealers (managers/owners) were contacted by phone and asked if they would be willing to participate in this study. A questionnaire was mailed to all dealers who had agreed to participate. Questionnaire responses were collected over the phone one week later. The final response rate was 85 percent.

Some of the major findings included the following:

1. An overall decrease was seen in full-time and part-time employment between the years of 1979 and 1985, however, industry dealers are anticipating an increase of 16 percent in full-time and a 21.7 percent increase in part-time positions by 1987.

2. Of the 30 mechanic skills surveyed, this study found that 18 competencies were significantly different, at the .05 level, between 1981 and 1985. Two competencies of the 1985 survey ranked higher and had higher mean scores than in 1981. These two items were: (1) maintain and practice shop safety, and (2) be familiar with OSHA standards and regulations. The remaining 16 significantly different competencies had lower mean scores but rankings were not drastically affected. The first, second, and third-ranked competency items in 1985 all dealt with safety, contrary to the 1981 rankings, where the ability to perform preventive maintenance ranked first. This item ranked fourth in 1985.

3. Of the 21 agribusiness skills surveyed, this study found that 6 were significantly different, at the .05 level, between 1981 and 1985. All significantly different agribusiness competencies were rated lower in 1985 than in 1981; however, this did not drastically affect the rankings of importance. The ability to read well, write legibly, do basic math problems, and to have proficient use of written and oral communication rated significantly lower in 1985 than in 1981, although the competency mean score was still considered important.

4. Prospective employees entering the Utah farm implement industry will not receive any preference, either in hiring or salary by obtaining a four-year degree.

5. Vocational training emerged as being more important to dealers in hiring practices in 1985 than in 1981.

Williams, R. D. (1984) The Alberta certified feeder program for preconditioned and preimmunized calves. Master of Science Thesis, Utah State University, Logan.

The mortality rates of preconditioned and preimmunized calves in the feedlots were compared to the mortality rates of calves that went through the same selling system (auction markets) but had no special treatments prior to being sold and to entering the feedlots.

The calves were in feedlots in the Provinces of Alberta and Ontario, with 91 locations reported as having one or both classes of preconditioned and preimmunized calves. Only a total of 12 lots, 8 in Alberta and 4 in Ontario, reported having all three classes as outlined in the research design.

In Alberta the mortality rate for the preconditioned class was 2 calves out of 261 calves, in 8 locations, with a death loss of loss in the preconditioned group of 2 calves out of 42 calves for a 4.76% death loss.

The preimmunized class had a death loss, at the Ponoka Central, of 2 calves out of 176 calves with a 1.1% mortality rate. The highest individual preimmunized location, Ponoka West, had a death loss of 2 calves out of 7 calves for a 28.5% mortality rate.

The auction market class (control group) had a death loss of 17 calves out of 938 calves for a 1.81% mortality rate. The highest individual location, Ponoka West, had a death loss of 1 calf out of 13 calves for a 7.7% mortality rate.

The 4 locations in Ontario reported no death losses in the preconditioned or preimmunized classes. The auction market class (control group) reported a death loss of 4 calves out of 740 calves for a .54% mortality rate. The Glen Morris location reported the highest death rate of 1 calf out of 100 calves for a 1% mortality rate.

No significant difference between the preconditioned, preimmunized, or control group was shown for the classes as organized.

VIRGINIA

Camp, W. G. (1985). Microcomputer assisted instruction software development. Virginia Department of Education funded project. Virginia Tech, Blacksburg.

This was the second year of a funded project for the state department of education. The purposes of the project were: (1) to develop CAI tutorial software for use in secondary vocational agriculture; (2) to provide inservice to teachers on the use of microcomputer software in instruction and program management.

A total of 7 self-paced and self-graded CAI tutorials were programmed for use on the Apple. They were field tested in two schools and are available from the developer or from the Virginia Department of Education. A total of 9 workshops were conducted, serving over one-half of the 360 teachers in the state.

Hillison, J. H., & Camp, W. G. (1985). Analysis of Prosser's sixteen theorems as they relate to current conditions in vocational education. Staff study. Virginia Tech, Blacksburg.

Historical analysis techniques were used to relate the early debates surrounding the development of vocational education as it was reflected in Prosser's Sixteen Theorems to current political, educational, and economic developments. The researchers concluded that major rethinking needs to be initiated by the profession with regard to its basic philosophical underpinnings, in light of changing conditions. Specific instances were dogma established in several of the theorems were untenable, given current conditions. The work is reported in The journal of vocational and technical education, volume 2, number 1.

Hillison, J. H., Camp, W. G., & Burke, S. R. (1985). Why students enter agricultural education. Staff study. Virginia Tech, Blacksburg.

The purposes of the study were to determine the differences (1) between males and females, (2) among option area specialties, (3) among types of majors, (4) by years of enrollment in vocational agriculture, (5) by years of membership in the FFA or 4H, (6) among ages for selecting a major, and (7) between 1985 and 1980 majors. The population for the study consisted of 54 majors for 1980 and 47 majors for 1985. The same instrument was used for both groups. Results indicated that 1980 students were most influenced by personal reasons. The 1985 students were most influenced by the same two categories of reasons, but in reverse order. The study emphasized the importance of students' agricultural education teacher in the choice of this major. Students in 1980 indicated choosing their major at 18.7 years of age, while students in 1985 chose their major at 17.6 years of age. Overall, the study's results yielded several implications for why students chose agricultural education as a major and helped determine several recruitment strategies.

WEST VIRGINIA

Ginindza, Christopher M. (1985). The distinguishing characteristics of highly successful teachers of vocational agriculture in West Virginia. Masters thesis. West Virginia University, Morgantown.

This study was designed to determine the major distinguishing characteristics of successful teachers of vocational agriculture as perceived by twelve West Virginia vocational agriculture teachers (10 percent) considered by state supervisors and teacher educators to be highly successful. Data were obtained through a modified Delphi technique. The initial instrument asked the participant to identify and list the five major personal, professional or technical characteristics which, in his/her opinion, cause people to consider him/her to be a highly successful teacher. The second instrument was formulated by a Q-sort committee who scrutinized, edited and combined first instrument returns into 35 ratable statements. Seventeen of the 35 statements were considered essential. Highest ratings were given to the statements "Ability to motivate students," "Enthusiasm for teaching," "Dedication to the teaching profession," and "Discipline in the classroom."

Hogan, Michael P. (1985). The role of extension in rural America as perceived by United States Senators. Masters thesis. West Virginia University, Morgantown.

The objective of this study was to determine how United States Senators perceive the role of the Cooperative Extension Service in rural America. A survey instrument was designed and sent to all members of the U.S. Senate during the 99th session of Congress. Responses were received from 53 percent. Data indicate that Senators feel the CES provides a necessary service to a large segment of America's rural population. A majority of Senators responding have participated in CES programs. Strong support was found for the traditional CES programs of agriculture and 4-H. Senators view full-time family farmers as the most important agricultural audience of CES, and perceived a great need for programs in soil, water, energy and forest resource conservation.

Kisner, Harry S. (1985). Determining the level of importance of criteria used to select State Farmers by West Virginia Association Future Farmers of America. Masters thesis. West Virginia University, Morgantown.

The major objective of this study was to determine the importance of various criteria used in evaluating State Farmer applicants in West Virginia as perceived by the 50 head teacher educators of original land grant institutions and the 50 state vocational agriculture program supervisors. Participants were asked to rate importance of each of the items appearing on the West Virginia State Farmer applicant evaluation form. Eighty-seven percent of the population responded, 43 supervisors and 44 teacher educators. Accuracy and completeness of experience program records and scope of experience program indicating growth toward establishment were considered, by far, the most important items in selection of State Farmer Degree recipients. The remaining eight items considered important dealt with specifics of experience programs and records, but also included the chapter adviser's recommendation and participation in FFA activities above the chapter level. Perceived as unimportant was the requirement of participation in ten parliamentary procedure activities, earnings from outside experience program sources, and personal property investments.

Samarasinghe, S. H. M. Gamini (1985). Effectiveness of visits to farmers' groups under the training and visit system of extension in Sri Lanka as perceived by Village Extenion Workers. Masters thesis. West Virginia University, Morgantown.

This study was designed to evaluate the effectiveness of visits to farmers' groups as perceived by Village Extension Workers (VEWs). Data were collected by questionnaire from 226 of the 361 VEWs in four randomly selected districts. Information derived from the study indicates that VEWs are somewhat dissatisfied with farmers' participation and performance in group activities. VEWs strongly believe that frequent and scheduled visits to farmers' groups helps them to identify needs and problems and to develop close relationships with farmers. They also agreed that they provide effective solutions for farmers' technical problems and that their visits influence a change in behavior and attitude of the farmer. VEWs are not satisfied with involvement of farmers in deciding points to be stressed in the extension program.

WISCONSIN

Duley, Carl A. (1985) Survey of communication skills needed by Wisconsin secondary vocational agriculture instructors. Master's Thesis, University of Wisconsin-River Falls, River Falls

Purpose. The purose of the study was to assess the need for communication skills by agriculture instructors. The assessment included an analysis of the instructor's age, educational background, years of teaching experience and size of the largest municipality within the school district as compared to instructors perceived value of communication channels and the perceived proficiency level for selected communication channels.

Method. Data were collected from an extensive review of literature and from a mailed questionnaire. The population consisted of the vocational agriculture instructors teaching in secondary schools in the State of Wisconsin. A random sample of 92 instructors or 30% of the population was chosen. Seventy percent of the agriculture instructors who were mailed questionnaires responded. A five point Lichert-type seal was used in the design of the questionnaire.

Findings. Agriculture instructors viewed their ability to communicate, using different communication channels very high. The channels of communication that the respondents felt the most proficient were those channels that involved personal contact between the instructor and people in the community. The respondents rated audiences that were closely associated with the school as the most important to include in their communication program. Parents, school administrators and agricultural leaders were among those audiences considered most important. Audiences that have little contact with the school such as senior citizens and adults without children in school were not seen as very important to keep informed. Agriculture instructors agreed that a number of communication channels are necessary to communicate effectively with the community but the size of the municipalities within the school district may have some effect on the channels that are available.

Mamza, Dabariju M. (1984). A review of selected learning theories and their application to Nigerian educational system Master of Science Paper, University of Wisconsin-River Falls, River Falls.

The purpose of this study was to identify learning theories appropriate for conditions in Nigeria. The study considered the historical development, overview and application of the learning theories to Nigerian educational system. It focused primarily at elementary and secondary school levels. Nigerian education was viewed under three categories namely: 1) indigenous education or the traditional education, 2) Qur'anic School System or the Islamic education, 3) western education as introduced by the missionaries. The findings of the study were: 1) the mind at birth is a blank tablet upon which knowledge is impressed by experience, 2) knowledge or ideas come to us only through sensory intake which is acted upon by the mind, 3) four principles of association include similarity, frequency, continguity and inseparability, 4) knowledge is the process of solving problems according to the scientific method of inductive reasoning, 5) the sense organs are the gateways of the mind, 6) character development is closely related to what a person learns and how he learns.

Okoi, Fidelis (1984). Assessment of selected agricultural competencies by broad area agriculture and agricultural education majors. Master of Science Thesis. University of Wisconsin-River Falls, River Falls.

The purpose of this study was an assessment of the importance of agricultural competencies as perceived by students enrolled in broad area agriculture and agricultural education majors. This study also compared the relationship between: (1) the reported scope of agricultural work experience; (2) years of FFA involvement; (3) university class of the students, and (4) the respondents' reported major, with students perceptions of the importance of the competencies.

The population included a randomly selected sample of 92 students enrolled in broad area agriculture and agricultural education, College of Agriculture, University of Wisconsin-River Falls. A total of 45 statements pertaining to students personal data, and competencies in

general agriculture, agricultural economics, agronomy, soil science, animal science, agricultural mechanics, and professional competencies were contained on the mail questionnaire. The competency statements were rated using a five-point Likert Scale of one through five. A t-test was used to test the five hypotheses of this study.

The major findings indicated that the categories of general agriculture competencies was perceived "as important" by both groups of respondants. The categories of agricultural economics, agronomy, soil science, agricultural mechanics and professional agricultural competencies were rated "very important" by both majors. Agricultural education majors ranked slightly higher than broad area agriculture majors in all the competency items assessed by the two groups. The students' FFA involvement has an effect upon competencies perceptions, since a significant difference existed between FFA involvement and competency assessment. There is also a significant difference between the respondents' reported major and their perception of the importance of professional agricultural competencies. No relationship was observed between "agricultural work experience" and the perception of the importance of the competency items.

Recommendations included active participation in FFA activities by students in vocational agricultural programs. Professional agricultural competencies within organizational participations, work shop and convention participations, FFA and SOE participation should be emphasized by students in broad area agriculture programs. Agricultural competencies taught to students in broad area agriculture and agricultural education programs should be periodically assessed, so that the programs will be up-to-date, more effective and reflect high quality among its students and graduates.

RESEARCH AND DEVELOPMENT ACTIVITIES IN PROGRESS

ALABAMA

Keita, M. and Morris, C. E. A year-round cropping plan for the limited resource farmer-a case study of the Tuskegee University small model farm. Masters thesis. Tuskegee University, Tuskegee.

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Whitehead, C. D. An analysis of micro-computer utilization in vocational agriculture departments in District III, Northeast Georgia. Master of education applied project. The University of Georgia, Athens.

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IOWA

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Bia, J. An analysis of the agricultural education needs on the Navajo Indian Reservation. Doctoral dissertation, Iowa State University, Ames.

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OHIO

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TENNESSEE

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TEXAS

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UTAH

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Cooper, T.D. A comparison of conventional tillage and conservation tillage in Utah. Utah State University, Logan.

Hirpa, H. A comparison of conventional and no-till farming systems of spring wheat. Utah State University, Logan.

Msati, N.M. Developing grazed class photo guides for estimation of range grass utilization in Utah. Utah State University, Logan.

Ojomo, C. A training program to teach Nigerian farmers the economics and procedures of artificial insemination and embryo transfer in dairy and beef cattle. Utah State University, Logan.

Rose, M.E. A model for comparing draft requirements of tillage equipment. Utah State University, Logan.

Thomas, D.W. Utah summer vocational agriculture program. Utah State University, Logan.

VIRGINIA

Anderson, G.A. Leadership competencies needed as a part of the young farmer instructional program. Dissertation. Virginia Polytechnic Institute and State University, Blacksburg.

Camp, W.G. Establishment of a telecommunications network for Virginia teachers of agriculture. Funded project, Virginia Department of Education. Virginia Polytechnic Institute and State University, Blacksburg.

Camp, W.G. A comparison of characteristics of agricultural education graduates of the high school classes of 1972 and 1980: a national study. Staff study, Virginia Polytechnic Institute and State University, Blacksburg.

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Clouse, J.P. & Watson, L.W. A comparison of Virginia FFA chapters based on their participation in the national Building Our American Communities program. Staff Study. Virginia Polytechnic Institute and State University, Blacksburg.

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Gajain, K. K. Effectiveness of the extension service in Zanzibar. Masters thesis, West Virginia University, Morgantown.

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Seymour, D. A. Values in young farmer education. Masters thesis. West Virginia University, Morgantown.

Weerakkody, P. Major problems in dissemination of agricultural information as perceived by county agricultural extension agents. Masters thesis. West Virginia University, Morgantown.

WISCONSIN

Buttles, Kevin L. Assess vocational agricultural program opportunities in Wisconsin Elementary and Middle Schools. Thesis paper. University of Wisconsin-River Falls.

Hakes, Lyle W. An assessment of the role of farm consultants as perceived by farmers and agricultural educators. Thesis paper. University of Wisconsin-River Falls.

Pur, Joseph T. Status of advisory councils in high school vocational agriculture in Wisconsin update. Thesis paper. University of Wisconsin-River Falls.

ERIC ACCESSION NUMBERS FOR PREVIOUS

REGIONAL SUMMARIES (1968-1974)

Year	Regions			
	Central	North Atlantic	Pacific	Southern
1968-1969	ED 036 642		ED 036 635	ED 038 543
1969-1970	ED 047 107	ED 047 108	ED 147 110	ED 047 109
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